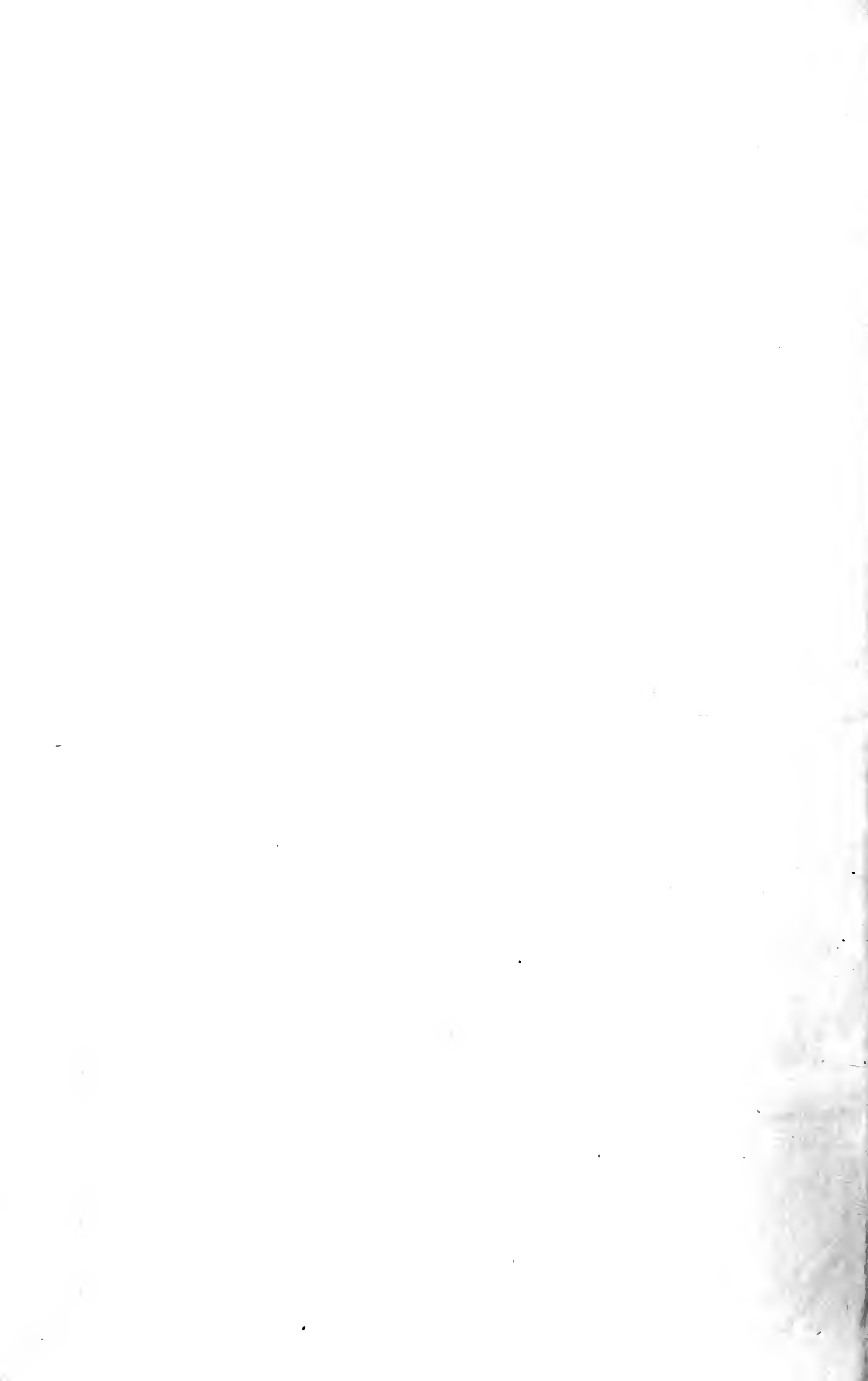

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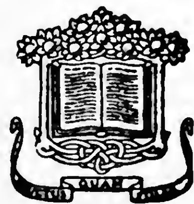

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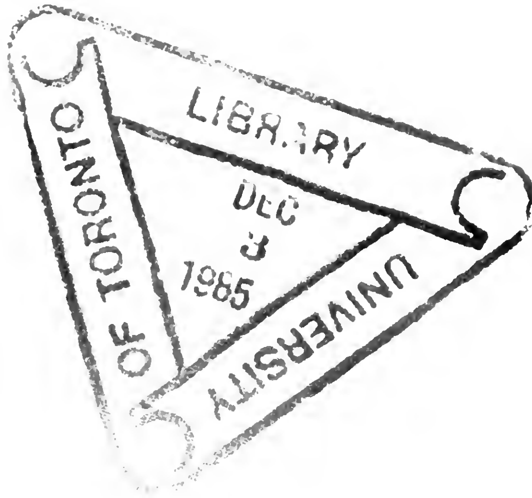

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The World's Work

WALTER H. PAGE, EDITOR

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MR. JOHN G. SHEDD

PRESIDENT OF MARSHALL, FIELD & COMPANY, OF CHICAGO, AND ONE OF THE FOREMOST MERCHANTS OF THE WORLD, WHO BELIEVES THAT "THE INDICATIONS OF THE PRESENT POINT STRONGLY TO AN INCREASE OF ACTIVITY" IN AMERICAN BUSINESS (See page 65)

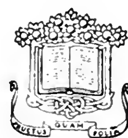
THE

WORLD'S WORK

NOVEMBER, 1912

VOLUME XXV

NUMBER 1



THE MARCH OF EVENTS

GOOD times are come again. The staple crops are big; and they will bring good prices, for the left-over supply is not large. The yield of corn is greater than ever before — nearly three billion bushels; the wheat yield is almost the top-notch; the potato crop is the largest in our history; and cotton approximates last year's great yield.

The farmer has a good year and those who depend on him and those who serve him and those who exploit him under our wasteful system all now have money; for this money quickly gets into circulation. Laborers and merchants, bankers small and great, the railroads and the steamships — much of it goes to these; and in its travels it keeps the wheels of trade in motion.

Corn, wheat, cotton — the earth has done most kindly this year in producing them; and this is the first great index of prosperity.

Another such index is the iron and steel trade, which also points to a general revival of prosperity. When great crops must be hauled, the railroads must put themselves in order; they must have more cars; they must have more rails, more locomotives. All wheels turn as soon as a great harvest is gathered, especially in a year of good prices.

And there are other indications, too. Our exports, in spite of the greatly increased home consumption of our food-products, mount higher and higher; ocean freight-rates have been increased, and it is impossible to charter steamers enough.

The westward stream of immigration also is again swollen. Laborers now come from Europe in great numbers when we have much work for them, and many of them go back when we have dull times. In spite of an increase in steerage rates, they are coming to us now in great swarms.

Farming land keeps rising in price in spite of its having doubled its value between 1900 and 1910.

And (quite as important as any other fact) men have become tired of waiting for commercial confidence to be restored. They seem, by a common impulse, to say to one another: "Let's stop waiting for something to happen. Let's go to work and make and buy and sell"; and when you and all your neighbors and all their neighbors of every craft and calling from one ocean to the other have this impulse, then what we call prosperity comes to pass.

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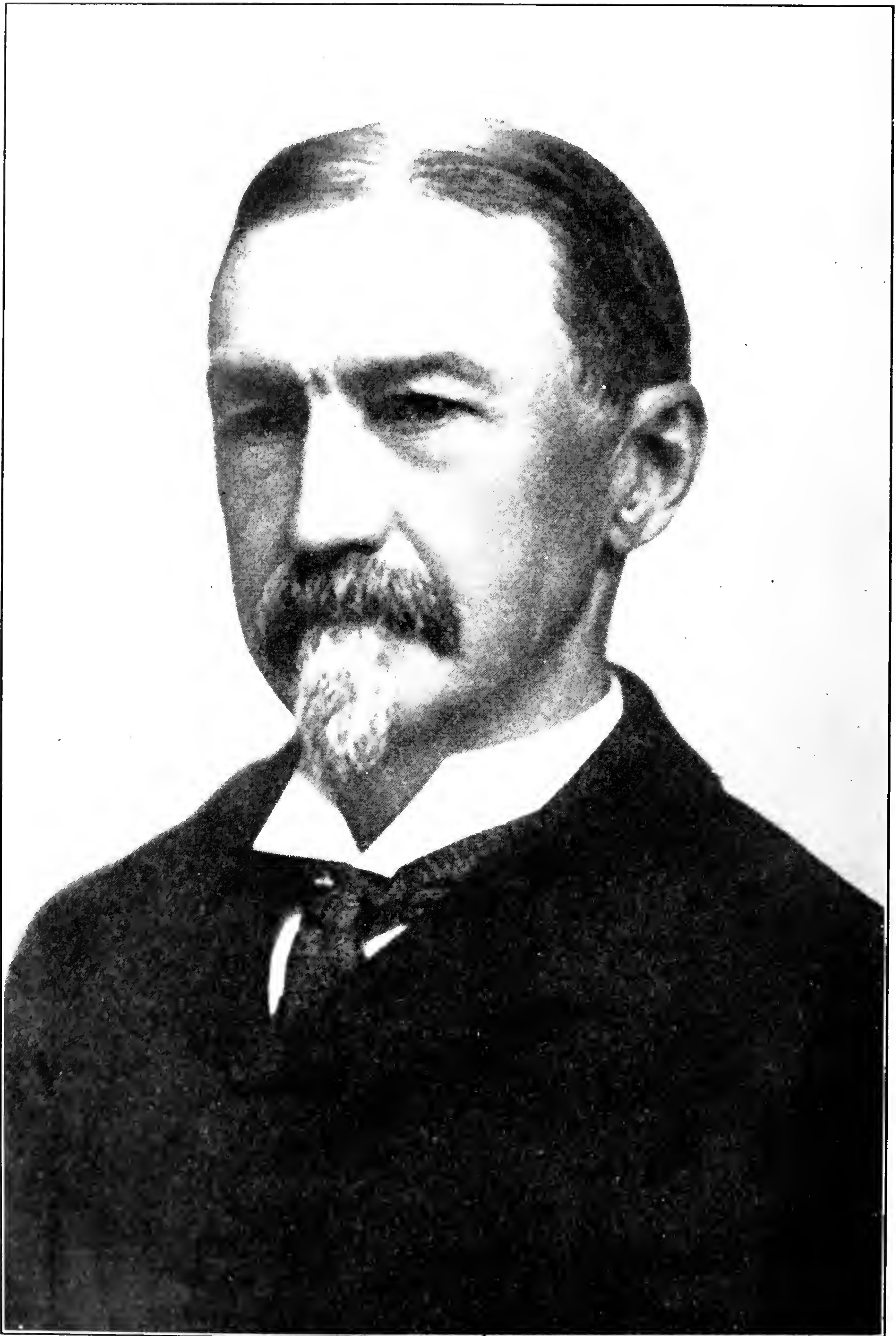

PROPHETS OF GOOD TIMES—MR. E. C. SIMMONS

CHAIRMAN OF THE SIMMONS HARDWARE COMPANY, WHO SAYS: "FOR FIVE YEARS, BUSINESS HAS HALTED AND HAS BEEN UNDER CONSIDERABLE DEPRESSION FROM VARIOUS CAUSES. THESE CAUSES NOW APPEAR TO BE REMOVED TO A GREAT EXTENT OR SIDE-TRACKED"

[See page 61]

PROPHETS OF GOOD TIMES—MR. R. S. LOVETT

CHAIRMAN OF THE HARRIMAN LINES, WHO RECENTLY DECLARED THAT "I HAVE NEVER KNOWN CROP CONDITIONS IN THE WEST TO BE BETTER. I DON'T KNOW HOW THEY COULD BE ANY BETTER. BUSINESS FOR THAT REASON IS UNUSUALLY FINE AND THE OUTLOOK EXCELLENT."

See page [illegible]

PROPHETS OF GOOD TIMES—MR. JAMES McCREA

PRESIDENT OF THE PENNSYLVANIA LINES, WHO SAYS: "PROSPERITY? WHY IT IS HERE. EVERYBODY CAN SEE THAT. THE PULSE OF THE WHOLE COUNTRY IS BEATING TO THE RHYTHM OF HAPPIER TIMES, AND WE ARE JUST ENTERING A NEW ERA OF PROSPERITY"

(See page 61)

PROF. IRVING FISHER

OF YALE, THE DISTINGUISHED POLITICAL ECONOMIST WHO ADVOCATES AN INTERNATIONAL CONGRESS TO PLAN A STABLE CURRENCY (See "The March of Events")

MR. M. B. TREZEVANT

SECRETARY-MANAGER OF THE NEW ORLEANS PROGRESSIVE UNION, WHO WAS RECENTLY ELECTED PRESIDENT OF THE NATIONAL ASSOCIATION OF COMMERCIAL EXECUTIVES AT THEIR SEVENTH ANNUAL CONVENTION AT WASHINGTON, D. C.

MR. GEORGE S. SMITH

CHAIRMAN OF THE BOSTON EXECUTIVE COMMITTEE, WHO OPENED THE FIFTH INTERNATIONAL CONGRESS OF CHAMBERS OF COMMERCE IN BOSTON AND WHO WAS ONE OF THOSE CHIEFLY RESPONSIBLE FOR THE SUCCESS OF ITS FIRST MEETING IN AMERICA

See [illegible]

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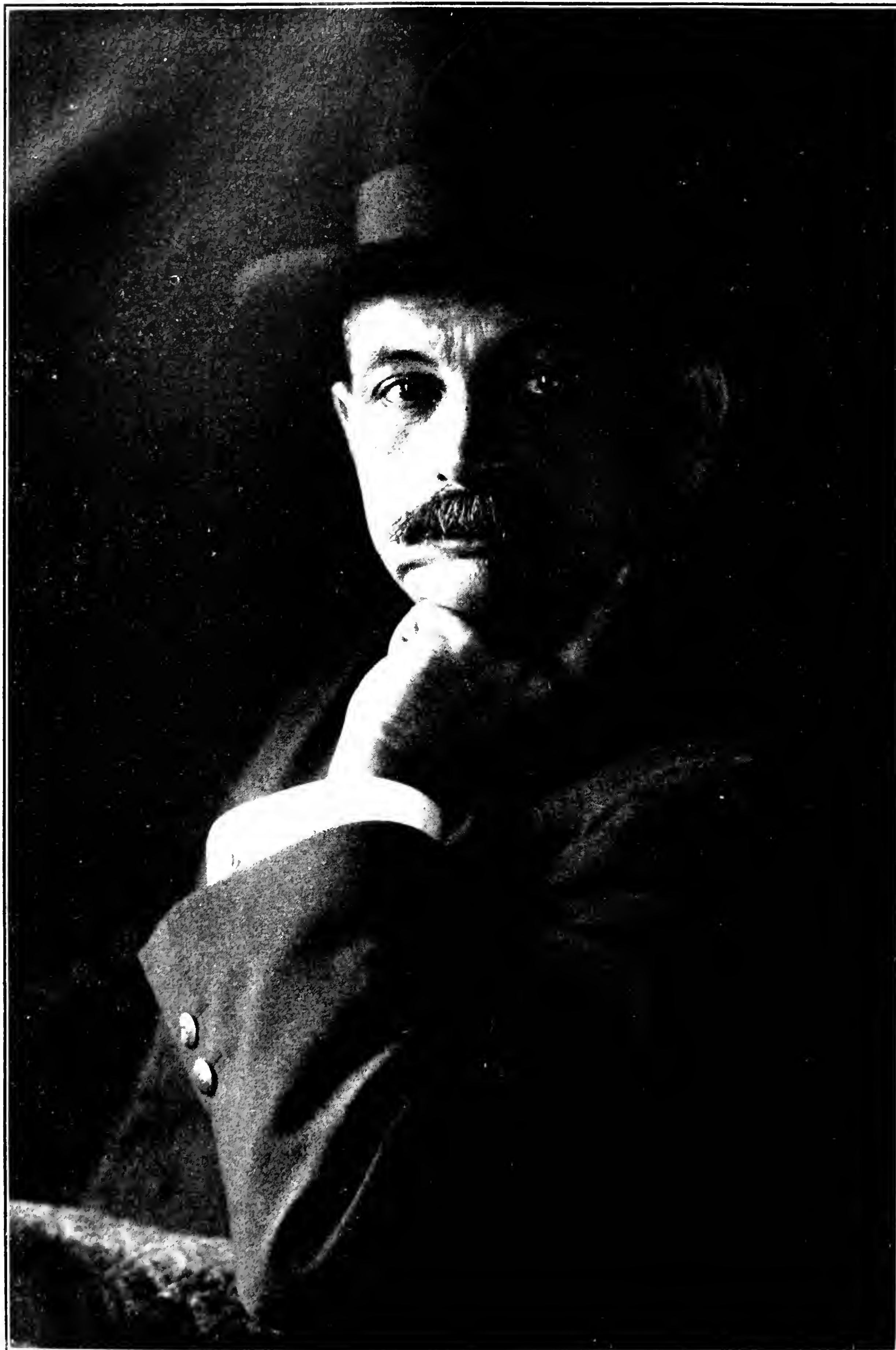
MR. HENRY E. HUNTINGTON

ONE OF THE MOST ENTHUSIASTIC OF THOSE MEN OF GREAT WEALTH WHO SPEND LARGE SUMS TO COLLECT RARE BOOKS; HE PAID $50,000 FOR THE PERFECT COPY OF THE GUTENBERG BIBLE FROM THE LIBRARY OF THE LATE ROBERT HOE

[See page 80]

MR. CHARLES P. NEILL

UNITED STATES COMMISSIONER OF LABOR, WHO HAS ACTED AS PACIFICATOR IN HUNDREDS OF INDUSTRIAL DISPUTES AND WHO IS ONE OF THE LARGE FIGURES IN THE STRUGGLE TO FIND AN ACCEPTABLE BASIS OF PEACE IN THIS MOST COSTLY OF MODERN WARS



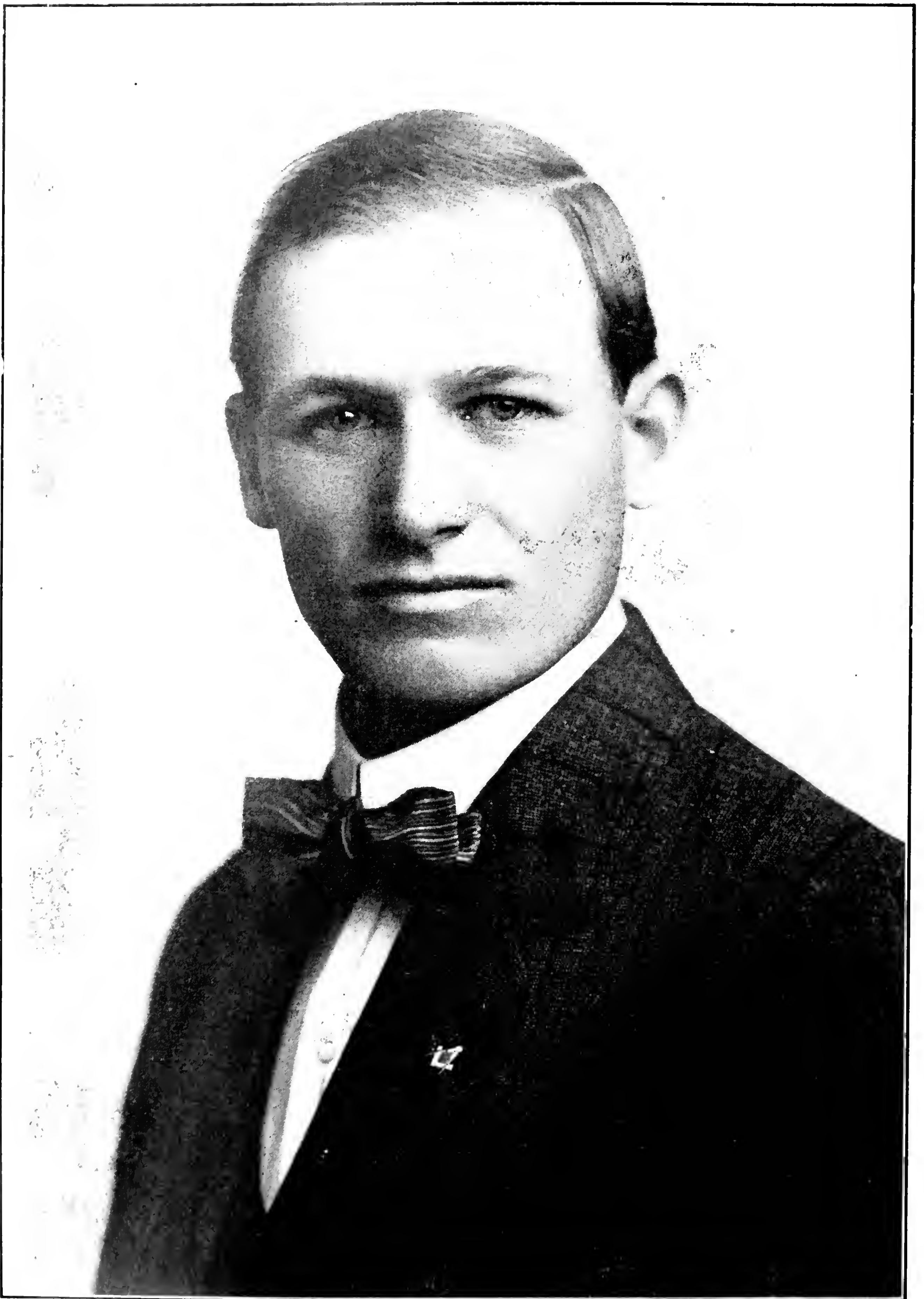
MR. CHARLES S. BARRETT

WHO RECENTLY, FOR THE SEVENTH CONSECUTIVE TIME, WAS ELECTED PRESIDENT OF THE NATIONAL FARMERS' UNION, WHICH NOW HAS ABOUT 2,000,000 PAID-UP MEMBERS; WHICH CONTROLS 11,000 CORPORATIONS THAT MANAGE ELEVATORS, WAREHOUSES, STORES, ETC.; AND WHICH EXERCISES A GREAT INFLUENCE UPON RURAL LIFE BY ITS PROPAGANDA FOR AGRICULTURAL EDUCATION AND FOR COÖPERATIVE SELLING OF FARM PRODUCTS

FATHER JOSE ALGUE

THE INVENTOR OF THE BAROCYCLONOMETER, WHICH PREDICTS THE APPROACH OF CYCLONIC STORMS SEVERAL DAYS BEFORE THEY ARRIVE AND WHICH HAS SAVED MILLIONS OF DOLLARS' WORTH OF PROPERTY IN THE PHILIPPINE ISLANDS, WHO IS INVESTIGATING WEATHER CONDITIONS IN THE WEST INDIES SO THAT HIS INVENTION MAY BE MADE USEFUL THERE

See "The March of Events"



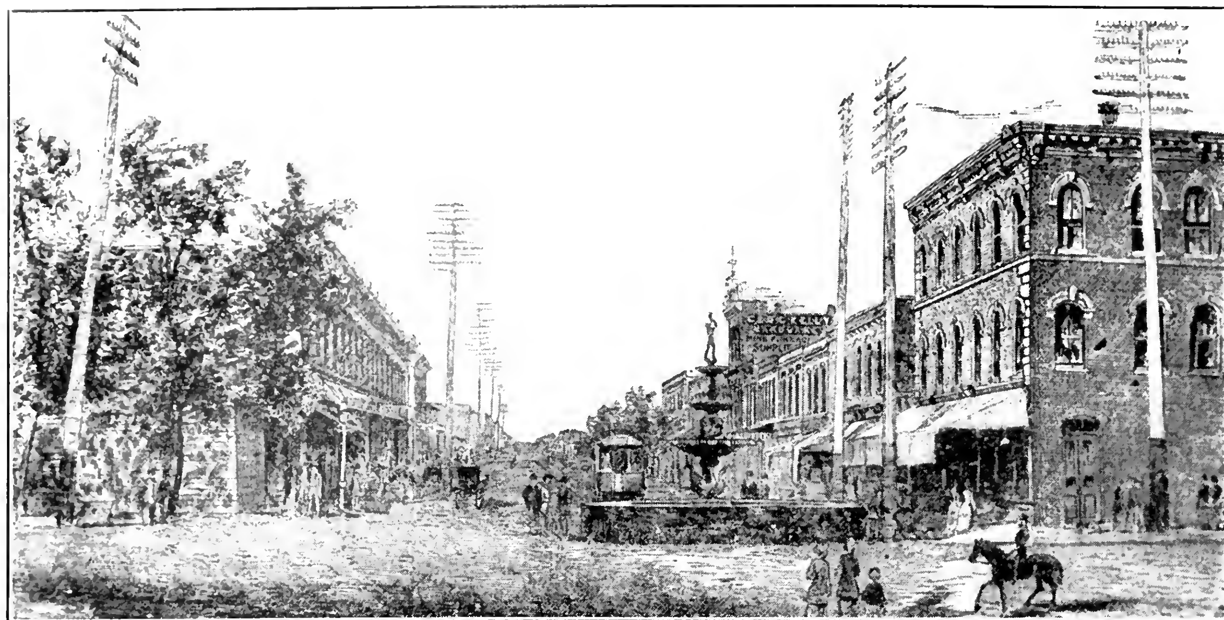
MR. TOM COOPER

THE DIRECTOR OF THE NORTH DAKOTA BETTER FARMING ASSOCIATION WHO IS TEACHING THE FARMERS PROSPERITY ON THEIR OWN FARMS (See page 84.)

MR. EDISON'S FIRST STORAGE BATTERY TRAIN

WHICH CARRIED MORE THAN 100 PASSENGERS 50 MILES FOR LESS THAN $2 FOR CURRENT. THE BATTERIES UNDER THE SEATS SUPPLY POWER FOR ABOUT ONE THIRD THE COST OF CURRENT FOR THE SAME WORK ON THE MOST MODERN THIRD-RAIL AND HIGH-POWER TROLLEY SYSTEMS

[See "The March of Events"]



THE GROWTH OF AMERICAN CITIES

THE SKY-LINE, IN 1894 AND IN 1912, OF BIRMINGHAM, ALA., WHICH, THOUGH BARELY TWENTY-FIVE YEARS OLD, HAS NOW A POPULATION OF 132,685. ITS PER CENT. OF INCREASE DURING THE LAST DECADE, 245.4, RANKS THIRD IN SUCH FIGURES FOR AMERICAN CITIES

GOOD SIGNS OF PROSPERITY

SOME of the recent evidences and early results of the coming of good times are interesting. For instance, during the late summer and the early fall there came to New York so many buyers of goods that the hotels were crowded. One big hotel, which a year before had closed up for those months two of its floors, this year turned people away. To fill all the hotels of New York — that requires something akin to a general migration from every part of the country.

And manufacturers, wholesalers, and importers had not for a long time been so rushed with orders for immediate delivery, nor asked for goods of such high grade. Merchants of the West, of the Middle West, and of the South bought especially high priced things for women. The buyer for a drygoods store in a large town of West Virginia announced that he had bought 60 per cent. more than he bought in the fall of 1911. "My inclination," he said, "was to buy even more; but my firm decided to take a conservative course, because present prospects seem to be almost too good to continue." Nor was this an exceptional experience: rather it was typical.

During the month of September there was no able-bodied man of the five million inhabitants of New York, willing to work, who could not have obtained employment for at least $1.60 a day. From all parts of the United States, too, came calls for help. The grain had practically all been harvested, but the farmers were still in need of laborers. Ocean, lake, and river traffic was at a maximum, and men who could and would work were in demand. The danger of a shortage of anthracite coal called men to the mines. The railroads and factories sounded the same cry. So urgent was the demand for able-bodied young men for the United States Army that recruiting officers were instructed to scrutinize less carefully than usual those who would enlist.

A threatened strike in New England made it advisable to organize in New York City a force of two thousand men, most of them unskilled laborers, with a minimum wage scale of $2.50 per day, with transportation, food, and lodgings. Included in this number were to be one hundred waiters. It required a week to find this number of men and enough waiters were not found at all.

A contractor, who had undertaken to complete a job of railroad grading in one of the South Atlantic states, found himself, in September, threatened with a heavy financial penalty unless he could put on an additional force of twelve hundred able-bodied men to work with shovels. He was forced to pay bonuses in New York and to give transportation to and from the field of labor and a minimum scale of wages of $2 a day, with food and lodging.

New York City itself has seldom presented so many signs of activity and industry. All over the city is heard the rat-tat-tat of automatic riveting machines on the iron work of the new buildings. Iron workers, carpenters, masons, and the better class of unskilled laborers are in such demand that they may command better wages than were ever paid before in the history of the country.

Exports and imports have both exceeded all previous records, and ocean-carrying rates are higher than they have been for many years. The tramp steamers that vainly sought cargoes and went out of commission during the dull years could all find profitable cargoes now. Stocks and bonds are selling more slowly than they were a while ago — an indication that money prefers to go into the channels of productive industry.

Yet this is a Presidential year. The forces of nature and of trade are enormouslystronger than the politicians. Man's fears and hesitancy have been swept away by the bounty of the earth, the resumption of industry, and the return of confidence.

AN UNSHRINKABLE DOLLAR

THE great fall of prices previous to 1896 meant that men with fixed incomes, either from securities or salary or wages, could get much more with their money than before. The great rise in prices which is going on

now means just the opposite. In one period $10 will buy a lot of clothes and food. At another time it will buy comparatively little. Sometimes we have a big dollar, sometimes we have a little one. The continual variation in its real purchasing power upsets every one's calculations upon the cost of doing business and upon the cost of living — and in the wake of these miscalculations, come alternately booms and panics, prosperity, strikes, and bread lines.

In this country and abroad there is a growing interest in keeping the dollar more stable, an interest which is showing itself in a demand for an international congress to discuss its variations and a remedy for them. This has the approval of all three presidential candidates, and many business organizations both here and abroad.

Professor Irving Fisher, of Yale, is chiefly responsible for this agitation. And in speaking before the International Chambers of Commerce at Boston he explained a plan, in part as follows:

I firmly believe that the time must come when business men throughout the world will feel the need of a more stable unit of value. Business men appreciate the necessity of a scientific determination of the yard, the pound, the hour, the horsepower, the kilowatt, etc. Governments have bureaus of standards to make sure that these units are determined to the highest possible degree of precision. Yet our yard-stick of purchasing power, the dollar, the most essential and universal unit employed by the business man, is permitted to change incessantly. The whole world complained when the dollar appreciated and complained when it depreciated. No one will deny that theoretically it ought neither to appreciate nor depreciate, but to remain unchanged. We have at present a dollar of fixed weight but not of fixed purchasing power.

Among the more ambitious plans which aim to go to the root of the matter is one of my own. This is similar to a suggestion of Governor Woodrow Wilson that the weight of the gold dollar should be increased enough to restore some of its lost purchasing power. My proposal is not literally but virtually to increase the weight of the gold dollar by increasing the weight of the bullion on which it is based.

I have said that my proposal is virtually to increase the weight of the gold dollar. But this increase in weight would not be added to the coins themselves, but only to the bullion, out of which they are made.

At present the coined dollar weighs the same as the bullion out of which it is made, and the Government makes no charge for putting the bullion through the mint. Professor Fisher's plan is to charge for this so that a miner will have to turn in three or four grains more than the 25.8 that are in a minted dollar. The amount of this extra is not to be fixed for all time. The adjustment of this extra, or "seigniorage" as it is called,

would be entirely automatic, dependent on an official index number of the price level. Index numbers are now familiar and well-tried devices for measuring changes in the general level of prices. The new official index number could be modeled on the well-known index numbers already in use, such as those of the United States Bureau of Labor, Bradstreet, Gibson, the Canadian Labor Office, the British Board of Trade, the London *Economist*, or of Sauerbeck, the London wool merchant. The system here proposed is, so far as I know, the only one proposed which is purely self-acting. If the official index number shows a rise of prices in any year, say 1 per cent., it would be mandatory for the mints to add 1 per cent. to the seigniorage. Expressed the other way about, if gold loses 1 per cent. of its value, the mints would pay 1 per cent. less for it. This would tend always to preserve a uniform purchasing power of the monetary unit. As soon as any depreciation occurred the increase of the seigniorage would operate to correct it. The present mint price is fixed; it is £3 17s. 10½d. per ounce of gold 11–12 fine in England, or $18.60 per ounce of gold 9-10 fine in the United States. The proposal is simply that instead of always paying the same money price for gold, no matter how much it appreciates or depreciates in purchasing power over goods, we would pay exactly what it is worth. There is no virtue in a fixed mint price for gold, but there is virtue in a fixed purchasing power of money.

FOR BETTER FARM FINANCE

MR. DAVID LUBIN, the director of the International Institute of Agriculture in Rome, brought the discussion of better credit for the farmers before the Southern Commercial Congress;

the President appointed a commission to study the coöperative credit societies abroad. The University of Wisconsin has sent a man to Europe to investigate. Mr. Yoakum, in his article on "The High Cost of Farming" in this magazine, started the discussion anew, and now comes the report of the President's commission submitted by Mr. Myron T. Herrick, the American ambassador at Paris.

The ambassador's report recommends the adoption of the Raiffeisen system of agricultural coöperative credit societies in this country. This system has been particularly successful in Germany where its operations constitute a large part of the business of the commercial banks.

The report in its recommendations does not give any new facts. Its chief value is in the aid it gives to the spread of knowledge about proper rural credit facilities. The report recommends that persons interested in the welfare of the farmer should form a general committee to direct the movement for providing better credit facilities in the agricultural districts; that the President call the people's attention to the matter; that state conventions be held to discuss the ways and means of promoting the propaganda, to be followed by a national convention. In this way it is hoped that the farmers will come to realize the advantages of forming coöperative credit societies; that the banking fraternity will see a new opportunity and duty; and that the state legislatures will see the necessity of passing suitable laws to encourage these improved methods of farm finance. Practically the only opposition to these methods is the opposition of ignorance. What is particularly needed is some such programme as the ambassador suggests to get the public attention focussed upon this all-important matter.

II

In the meanwhile, four bankers in Joliet, Ill., have made a start. After several years investigations these gentlemen have incorporated the Woodruff Trust Company, the first state land credit bank to be organized in this country. Following the custom of its model, the great Credit Foncier of France, the trust company, through its various agencies, will lend money on farms, it is hoped, at less than the present rates of interest. The loans will be for long periods (with no renewal commissions) and not subject to call, but the farmer may pay a small part of the principal with the interest every six months, so that there will never be a large payment to make.

To finance this plan the trust company will issue its collateral mortgage bonds. These bonds will be the direct obligation of the company, secured by its capital of $250,000 and by the farm mortgages deposited with another trust company.

Mr. George Woodruff, the founder of the company, is quoted in *American Bankers* as saying:

> This is simply a part of the 'back to the farm' idea. We have been talking about soil conservation, diversified farming, rotation of crops, vocational education, etc., but up to this time we have not made it easy for the farmer to carry his financial burdens. The farmer is the safest borrower in the world. He needs money sometimes, but he makes money and he pays his debts. What we intend to do now is to make it more easy for the farmer to carry out his plans for improvement. We will lower his rate of interest and simplify the manner in which he can borrow money on his real estate holdings. This new company is not by any means an experiment. Other countries have companies of this kind and they have become a real necessity. We have studied the approved systems of the Old World and have adapted their good points to a new system for America. Having studied the problem exhaustively we have come to the point of action. We take a little pardonable pride in getting on the ground first, but that is a mere incident. Such institutions will soon be numerous all over the country, and I predict that they will be a most popular financial institution.

A CONGRESS OF COMMERCE

THE Fifth International Congress of Chambers of Commerce recently held in Boston was a pleasant and notable event, which added its influence to the slowly dawning day in which we shall realize the importance

of world-markets and make an intelligent effort to secure them. The questions which it discussed — such as the unification of legislation relating to checks, the institution of an international office of commercial statistics, the question of international bills of lading — important as they are, are not as valuable as the acquaintanceship with America and American merchants that was gained by the seven hundred delegates from all the world. The men from Turkey and Belgium met our manufacturers from St. Louis and Detroit as well as Boston and vicinity. The visit of so distinguished and representative a body of men as these business delegates should help materially to break down the barriers of ignorance which are among the greatest deterrents to our foreign trade. More concrete than this, many of the foreign delegates to this conference came with orders for American goods in their pockets, and where these are pioneer orders they will probably start new channels of trade through which many different kinds of our goods may pass to foreign consumers — to our profit and to theirs.

THE TRUSTS — WHERE ARE WE?

THE trust problem has been discussed with more illumination than any other; for this important distinction has been made clear:

One group of people (Mr. Roosevelt is their chief spokesman) would have a Board created by the Federal Government, somewhat parallel to the Interstate Commerce Commission, which should regulate great corporations as the Commission regulates the railroads.

Another group (of which Governor Wilson is the clearest spokesman) would free the Government from the control or the influence of men who profit by special privilege in any form; and they believe that this course would restore competition except in "natural" monopolies. Such freedom of the Government being once established, no more "trusts" that restrict competition would come into being and those that exist would not be able long to maintain the monopolies which they now enjoy.

One method is to regulate monopolies: the other, to restore competition.

II

To unhand the Government is the plan that commends itself to the economic mind. So long as we have laws and customs and governmental activities that invite the restriction of competition, so long shall we suffer from restraint of trade; and it were idle to put into the hands of any board of men the authority to supervise and to "control" the business of the people of the United States. It were idle and impossible.

We have too easily and quickly come to the conclusion that many great trusts are inevitable and necessary. We have accepted the word of their organizers that they necessarily make for economy and efficiency. This conclusion, in the cases of many of them, is receiving rude shocks. Suppose their tariff privileges were abridged; suppose their private influence in the Senate and in other parts of the Government were abolished; suppose they were all put to it to hold their own against honest and open competition; and suppose they could not, by sheer financial strength, drive smaller competitors from the market by underselling them at a loss in their own territory — what would happen? The objectionable trusts would not all survive.

Suppose, further, that half the wastes in the conduct of the Government were stopped, such as the continual additions to the pension-cost, and we should find the Government treasury with a big surplus, inviting the lowering of the tariff — what then?

This much at least is to be said and to be remembered: we have tried the plan of inviting and permitting monopoly and then of trying to draw its teeth. Who shall predict the result? Surely, at the best, we have not solved the difficulty.

III

Even the credit trust, or "money trust," is a condition rather than a conspiracy. Everybody knows that small groups of men in the financial centres — notably in New York — have an undue power in granting or in withholding credit. They

can prevent the financing of industrial enterprises that would compete with their own enterprises.

Now any effort to attack these masters of finance which proceeds upon the theory that they have made a deliberate conspiracy against the public welfare is bound to fail. They use their undue power quite as often for the public welfare — especially when it pays them and sometimes when it does not pay them — as they use it against it. They are the inevitable results of a condition.

The sensible effort to make is to try, by natural methods, to change this condition. Now the keystone of this condition is the industrial trusts, in which these masters of finance are interested. Many of them are trusts that have a practical monopoly won by special privileges and private power in the Government.

It is not granted by the best thinkers, nor is it believed by the people, that the period of competition in most industries is passed. A street railway, a water-power, many lines of railroads — such things as these must be monopolies. But the manufacture of articles of food and of daily use — these cannot be monopolized except by the controlling ownership of the supply of raw materials or by governmental favors.

The problem is not to permit the growth of monopolies and then to try to regulate them, but rather to bring about a condition in which they cannot flourish — except, of course, the "natural" monopolies, which must be regulated. And thus a long step at least may be taken toward the restoration of competition.

Perhaps the strong and noisy and rushing trusts of our time have somewhat confused our thought and made us speak of "a new era," when the truth was that we were passing through a temporary phase of tyranny and mystification.

THE SCHOOL REVOLUTION

IT IS an amazing fact that the "better" the country schools in such a state as New Hampshire have been, the worse they have served the community; for they have trained the youth to run to the cities, most of them to become parts of the unproductive population. Now, if the better you make a thing the worse off you are, something is wrong.

So at least and at last the people of Colebrook, N. H., thought; and they have broadened their "academy," which is their high school, so as to train "the strongest youth toward the farm and the industries, instead of toward the professions and business exclusively"; for "the primary object of the education of the boy and the girl is to become a sincere and efficient and happy man and woman, capable of becoming an educated worker with material things, capable of getting life's happiness out of work rather than out of the leisure which comes after work, if indeed it comes at all."

All this is true — so true that it seems a waste of words to say it. But it is the "educational" way of announcing that the Colebrook Academy has built "a greenhouse, a dairy laboratory, a domestic arts department, and a workshop including a carpenter and blacksmith shop," and that "complete courses are given in agriculture and domestic science. Colebrook is the centre of a rural district and these are the vital interests of a large part of the population."

An admirable change, a necessary change, a change above praise. But it comes hard to the old-time educational habit of mind. For you have to read all this about it, in the bulletin issued by the United States Bureau of Education:

> Starting in the first third of the century as a private school, Colebrook Academy later became part of the public system of education. For years it has successfully done the work expected of a high school in the traditional branches of the New England school. Now it is trying to do something more. Without lowering its standards, without ceasing to furnish the training necessary for those going into the professions, it is endeavoring to provide an adequate education for the great mass of boys and girls who ought to remain and grow up with the country. It is seeking, in other words, to readjust itself to the needs of the particular community in which it is.
>
> Colebrook Academy does not propose to become a vocational school. It remains a general high school. The courses in agricul-

ture and domestic science exist side by side with thorough courses in the traditional high-school subjects, as well as the commercial branches. "Its purpose is not primarily to make good farmers, or skilled mechanics, or professional housekeepers," says Hon. H. C. Morrison, State Superintendent of New Hampshire.

And so on. Well, it would be churlish to quarrel with men who have done so good a thing. Words are cheap and plentiful and often they serve consolatory and apologetic, as well as elucidating uses. Since Colebrook Academy will now go about its right task, the verbose readjustments of the pedagogical mind need not disturb anything but the muscles with which you smile.

And when you have got done smiling, ask yourself this question — whether the public school nearest you, in which as a good citizen you have a direct interest, is doing *its* job, as Colebrook Academy is doing *its* job. And if it is not, to what extent are you to blame? How we do love to read about tasks at a distance and to criticize people who fail to do them or to cheer them when they do them right! This is easier by far than to buckle down to our own duties.

THE CARIBBEAN CRISIS

THREE thousand of our marines, some time ago, temporarily quieted a revolution in Nicaragua, but their withdrawal, it was feared, would be the signal of renewed massacre. Meanwhile business and labor was suspended; money disappeared from circulation, and people died of starvation. Citizens of the adjoining state of Costa Rica, the most stable of Central American countries, united in a demand that we withdraw from Nicaragua.

We have found it necessary to interfere actively again in Santo Domingo, where for several years we have had the customs under our protection. Insurrections on various coasts of the island caused the abandonment of several customs-houses, and the American collectors in charge of them have nothing to do. This cannot be said to reflect glory on the peace-ensuring semi-protectorate which the United States now exercises over Santo Domingo, and 800 marines were sent to set matters right.

The Government of Cuba has again been in trouble; and the financial and moral bankruptcy of the island is reported to be imminent.

II

The greatest external question confronting the United States is the question of its attitude toward the countries bordering the Caribbean Sea. We have no policy regarding these troubled lands and tumultuous peoples. We cannot keep our hands off; we are constantly forced to act, first here, then there, then in three or four countries at once, but we act without any settled plan or conviction. The State Department is at odds with the Senate; the President seems uncertain; and the people have been too busy with other things and too little interested in anything outside our own frontiers, to give the subject any thought.

The first thing to do is to realize the tragic horrors of daily existence in the unhappy lands for which the rest of the world, at all events, holds us responsible. It is surprising to find journals all over the country quoting the recent descriptions of the WORLD'S WORK articles and demanding the abandonment of the Monroe Doctrine, so that European Powers may be free to remedy the intolerable conditions with which we have refused to deal. That is perhaps a hasty conclusion for any responsible man or journal to draw, yet some conclusion, some settled policy, there must be. In addition to our trouble with Santo Domingo and Nicaragua and the danger that we shall have to interfere in Cuba, the Mexican turmoil may grow too serious for toleration. Hayti, Guatemala, and Honduras may "blow up" any day. It is time for the people of the United States to take to heart the gravity of the question, "What is our duty with respect to Caribbean America?" before some swift calamity hurries us, without time for thought, into acts that shall be full of destiny for our future place among the nations of the world.

DISMISSED — VINDICATED

THREE years ago much was said in this magazine about the Cunningham claims in Alaska. Mr. Louis R. Glavis and Mr. Gifford Pinchot, it will be recalled, were dismissed from the public service because of the controversy provoked by their declaring these claims fraudulent. Mr. Richard Ballinger was Secretary of the Interior, and he withstood for a time the shocks of public indignation, President Taft continuing his support.

These incidents are now recalled by the recent rejection of these claims by Secretary Fisher; and this rejection is an official declaration that Mr. Pinchot and Mr. Glavis were right — to whom, so far as the public knows, no apology has been offered.

THE NEAR MILLENIUM IN KANSAS

MR. JOHN S. DAWSON, the Attorney-General of Kansas, in a letter in aid of the cause of prohibition recently wrote:

> The test of the value of prohibition is the net result for Kansas in thirty years. Almost a third of the entire population is enrolled in school. Illiteracy has been reduced from 49 per cent. to less than 2 per cent., and that trifling amount is almost entirely among the foreign element.
>
> With 105 counties in the state, 87 of them have no insane; 54 have no feeble-minded; 96 have no inebriates, and the few we do have come from the cities which defied the law to the very last. Thirty-eight county poor farms have no inmates. There is only one pauper to every 3,000 population. In July, 1911, 53 county jails were empty, 65 counties had no prisoners serving sentences. Some counties have not called a jury to try a criminal case in ten years, and a grand jury is so uncommon that half of our people wouldn't know what it is. In my home county in Western Kansas there has been but one Grand Jury and that was twenty-five years ago.

Whether or not these things are altogether due to prohibition, the consumption of liquor in Kansas has been reduced, until now (according to the statistics) the average Kansan drinks only $1.48 worth a year. Thirty years ago he had $29.60 worth of strong drink, and in the neighboring state of Missouri at present the average consumption is $24 worth a year.

The condition of Kansas is not quite so near the millenium as the figures of the Attorney-General indicate. For example, many of the schools, notwithstanding that they have overcome illiteracy, are the old-fashioned inadequate one and two room affairs that prepare their scholars but little for modern life. In many of the counties that boast of no paupers the standards of country life are not as high as they could be or will be. And yet, in spite of these limitations, it is a very remarkable showing that Kansas has made — a showing that might tempt other states to take stock of the condition of their people's lawlessness, ignorance, inebriety, and poverty. A state that is getting rid of these restraints of right living is certainly preparing for the happiness and prosperity of its people.

A CHANGE IN AMERICAN CITIES

A FORMER resident of New York, returning recently after four years' absence, was most impressed by the change in color of the buildings. In his memory the old tone of the city was fixed by its miles of brownstone fronts and by the dingy drab or dull red of the office buildings. On his return the other day he found this monotony of sombreness broken in a thousand places by high colors. The new skyscrapers and loft buildings are almost all in white, and many an old four-story brick is lively with new paint in gayer shades. The architecture, too, has responded to the brighter mood; massive effects have given way to airy towers that lightly attempt the clouds.

AN INSTRUCTIVE CAMPAIGN

THE political campaign — up to the time that this is written, within a few weeks of its end — has been orderly, rather quiet, and instructive. The contest for the Presidency is between

Governor Wilson and Mr. Roosevelt. The contest for the control of the anti-Democratic organization during the next four years is between Mr. Roosevelt and Mr. Taft.

Alike to the discussion and to the noise, the President has contributed least — both he and his friends. He has respected the dignity of his office and refrained from making speeches. His friends have conducted a somewhat tame campaign, but they have done for their party quite all that it was dignified and proper to do; for they rest their case on the President's record in office and depend on the Republican organization.

Mr. Taft, all fair-minded men will agree, has failed to receive the credit due him. He has not been a successful party-leader, nor has he shown the skill to put into law the policies that he took up. But, as Presidents came and went during, let us say, the period from Grant to Roosevelt, he has deserved far better of his party and of his country than the contemptuous treatment that he has received from Mr. Roosevelt and his followers.

Mr. Roosevelt and his Third Party are cutting an important and somewhat portentous figure with their many-planked platform. The economic planks of the party — its tariff board, the confused and contradictory and unthought-out interpretation of the tariff made by Mr. Roosevelt himself; its proposed Board of Corporation Management; its minimum-wage scheme, and such like plans — do not commend themselves to the well-trained economic mind; but the moral purpose of many men and women of this party has brought a new note into a national campaign. What Mr. Roosevelt calls "social justice" is a very real demand; and the aspiration for the betterment of living conditions has caught the enthusiasm of many of the best men and women in the land. Of course, too, it has caught the "social reform" cranks. Yet the improvement of the common lot of the toiling millions — this is more than a popular doctrine: it is also a crying need. To what extent the National Government, especially the Presidency, is a proper or possible machine for bringing social justice is debatable. But it is instructive to use a Presidential campaign to emphasize these aspirations; and we shall be the better off for the arousement of this party.

As for the political effect of his campaign, we shall know more four years hence; for by that time it will have become clearer whether the old Democratic party is capable of becoming an orderly and self-restrained instrument of government, and whether the Republican party can recover from this serious breach.

Hazardous and foolish as political prophecy is, it seems now practically certain that Governor Wilson will be elected. Add to the inherent strength of his personality and of his principles the breach in the Republican party, and it becomes almost impossible to forecast any other result

Governor Wilson's contribution to the campaign has been exceedingly instructive. An excellent speaker without boisterousness, a vigorous debater without bitterness, colloquial with dignity, aggressive without abuse — he has captured the convictions and the loyalty of men of his own party and of many independents as well. "Free the Government from private control," has been his cry; and it has met the response that it deserves.

It is, in fact, the beginning of a new era in our political life. The old-time campaign methods are passed — the method of practically buying an election with huge campaign funds, the method of invisible rule. The open door, the voluntary fund, the coming of the people again into more direct management of their Government — these things are more nearly true than they have been during any preceding campaign that men now living can recall.

THE NEXT SENATE

SENATORS of the United States at present number 94. A full Senate would number 96, but there are just now two vacant seats: one from Illinois and the other from Colorado.

The terms of 32 Senators expire next March; of these 19 are Republicans and 13 Democrats. These leave hold-over

Senators numbering, Republicans 32, Democrats 30. With 34 to elect.

The 34 new Senators will come from 33 states. Of these states 12 are certain to send Democrats:

Alabama	North Carolina
Arkansas	New Jersey
Georgia	Oklahoma
Kentucky	South Carolina
Louisiana	Texas
Mississippi	Virginia

Fourteen states are likely to send Republican Senators:

Delaware	Minnesota
Idaho	New Hampshire
Illinois	Oregon
Iowa	Rhode Island
Kansas	South Dakota
Massachusetts	New York
Michigan	New Mexico

This would make (Illinois electing two) 47 Republicans and 42 Democrats, with 7 seats still uncounted.

These are the Senators to be chosen from Maine, West Virginia, California, Nebraska, Tennessee, Montana, and Nevada. The legislatures in the five last-named states are now Democratic, and the chances are that they will be so when Senators are chosen. This would bring the Democratic membership of the Senate up to 47, the same as the Republican membership. Maine and West Virginia afford no good ground for prediction, but it seems likely that neither Republicans nor Democrats will have a very strong majority. The advantage, in any case, will lie with the Democrats, for among the Senators above listed as "Republican" will be a dozen Insurgents and Progressives, who would be far more likely to support than to oppose the policies of a Democratic President like Wilson.

CAMPAIGN EXPENDITURES

THE publication by the National Democratic and the Third Party committees of the contributors to their campaign funds doubtless dries up certain sources of supply; but it gives the public a very profound satisfaction; and it goes a good way toward making a large fund unnecessary. Of course contributions from sources that seek secrecy can yet be made to various state committees, and the "openness" of the contribution-box can easily be evaded in other ways. But this good "open" practice has put the committees themselves and the candidates on their honor; and it is the first step — and a long step — toward honest elections.

In preceding campaigns few men cared how much money a candidate had, where he got it, or how he spent it. But the awakening of a public conscience has been swift; and the new spirit of jealous integrity with which we now watch the gathering of political funds and prepare to scrutinize the sworn statements of their expenditure is astonishing. The influence of Mr. Hanna is at last passing.

So complete is the popular revulsion against large funds that the committees are in danger of having less money than they really need. Fifteen thousand dollars is the average of the price paid by each of the three big party committees for their New York headquarters alone. The Bull Mooses have a hotel floor; the Republicans and the Democrats extensive suites in expensive business buildings on Broadway. The Roosevelt boomers hired their quarters furnished in the best hotel style; they had only to import some extra desks and typewriters and a safe. The Democrats put in $7,500 worth of furniture; they did not buy this outright, but bargained for its use for three months for 40 per cent. of its price. For furniture and woodwork the Democratic headquarters at Chicago paid $8,000.

The numbers of salaried employees of course vary, but at least a hundred clerks, stenographers, and book-keepers are visible at the Democratic rooms in New York, to say nothing of salaried men in more important positions — for, while there are plenty of volunteers, much of the steady work, even at the heads of bureaus, is done by paid experts. Then there are the speakers. Few of them draw salaries, but the expenses of nearly all are paid, and the oratorical item is a costly one. The "Speakers' Bureau" expenses of Mr.

Bryan's campaign of 1908 is said to have been the smallest of the generation: it was $33,786.

Other expenses of that campaign — the model of cheapness — were: postage, $37,452; telegrams, $13,761; telephone, $2,199; expressage, $13,061; publicity bureau, $88,899; organization of states, $129,053; labor bureau, $37,401; documents, $142,537.

This last-mentioned specification is always the heaviest legitimate charge of the campaign. The preparation and distribution of tons of "literature" is the hardest work of the committee. This year both Republicans and Democrats publish a campaign text book four times the size of a modern novel. Nominally sold, it is really given away to party workers, or at best "charged" to the state organizations. Various portions of these books are printed separately and distributed in vast quantities; for instance, 1,000,000 copies of the text-book "Life" of the Democratic candidate were printed this year.

Within a month after its organization the Roosevelt Committee had contracted for $100,000 worth of printing alone. At the end of the first month the Democratic Committee estimated that its printing and distribution of "literature" would cost $250,000.

This is apart from what is known as "publicity." For that — namely, the services of experienced newspaper men in the preparation of "copy," the gathering and distribution of news favorable to the candidate, the preparation and distribution of plate matter for country newspapers, etc., etc. — each of the parties will this year spend at least $100,000.

In addition to documents, pictures of the candidates and campaign buttons are freely distributed. The Bull Mooses began the campaign by ordering 2,500,000 buttons; 5,000,000 Wilson and Marshal buttons were ordered. This is probably a sheer waste of money.

The Secretary of the Roosevelt National Committee made a special point of it that the Committee would take no advantage of the *Congressional Record* method of sending out documents. In other days, the country was flooded with political tracts inserted in the *Record* under the "leave to print" rule. It is the common belief that all this matter is printed and mailed at the expense of the Government, but this is not quite the fact. The Government pays for only a limited edition of the *Record* — a few thousand copies. Then Members and Senators may order any number of copies, but they have to pay for the paper and printing. Postage, however, is free, and the great saving is there.

All the National Committees this year take this high ground, that they will not use the *Record* to get documents out postage-free, though naturally they cannot prevent well-meaning but less conscientious Representatives and Senators from doing so — at a considerable saving of their own postage bill.

Early this summer the Taft campaign committee dickered for $250,000 worth of placard advertising — perhaps another waste.

There will be no such item as $129,000 for the "organization of states" this year in any committee's report. The new law requiring the publication of campaign finances stipulates that vouchers shall acknowledge every expenditure of more than $5. The states will be helped — Maine was helped by all the Committees — but in legitimate ways only. It is too much to expect that no money will be corruptly used, but it is certain that no publicly known committee or agent for the collection of money can use it otherwise than for purposes such as can be fully justified before the public.

Four years ago the Democratic National Committee spent about $900,000; the Republican Committee expenditures were never revealed; two millions was an estimate commonly accepted. This year the Wilson organization started with the intention of making a low record, but later the great demand for "literature" and the prospects of contributions induced the leaders to draw up a budget of nearly $1,000,000. By the time this is printed much later figures will be made public, but it may now be safely predicted that $1,000,000 will be about the average of the three committees' expenditures.

DISCOVERING THE SCHOOLHOUSE

GOVERNOR WILSON and Mr. Roosevelt a little while ago discovered the schoolhouse. That is to say, they reminded the people that it is their building, that it is usually occupied six or seven hours a day for five days a week for a part of the year and — is a dead waste the rest of the time.

Now merely to occupy a public building to keep it from remaining empty is no very worthy ambition: you can waste your time in a schoolhouse as easily as you can waste it anywhere else. But, if you take the trouble to go to the schoolhouse and your neighbors take the same trouble, you are pretty sure not to waste it. In the first place, you will come to know one another better: that is much. You may have a political discussion: that would be instructive. You may have a moving-picture show: that, if well chosen, will be interesting. You may have a lecture on hogs or alfalfa or peach-trees or cows or how deep to plow or the best disposition of kitchen and closet waste or how to get rid of flies or the propagating capacity of fleas or the tariff or the trusts or how to keep potatoes, or you may have a spelling-bee or a demonstration how to can tomatoes or to carve a duck or to cure a ham or to make quince jelly or to put up figs; or you may have a chrysanthemum show or you may discuss the different methods of putting running water in the house or the diseases and parasites that we get from dogs, the uselessness of cats; or you may find out precisely how the referendum has worked in Oregon, or the Torrens land system in Australia — if you are the right man or woman in your community you can find out what will most keenly interest the neighborhood and you can bring that thing to pass — to the better acquaintance of those that live about you, to the encouragement of many who think alone, and to the building-up of the mightiest of all things under the sun, viz., an organized public opinion on some subject worth while.

Incidentally, of course, you'll presently go far toward making the every-day "exercises" of the school a real human performance that touches life, that rests on the earth, that has to do with present things and that will really affect the lives of the children. If you are persistent, you may even discover that there are children of all ages, that a schoolhouse is a good thing for old folks as well as young, that the period of instruction never ends. Perhaps it will occur to you some day that an earnest man or woman may learn anything anywhere and that your own neighborhood contains most interesting people, and that you are fortunate to live among them. The first law of progress is to wake up! Governor Wilson and Mr. Roosevelt are conveniently repeating what thousands of American people are constantly finding for themselves to be true.

A NEW SORT OF PROCLAMATION

A LITTLE while ago the farmer was a "hayseed," a countryman with long chin-whiskers, who wore big boots. Processes of farming — any fool could plant corn and cotton and wheat and gather the crop; and public attention was paid to agriculture chiefly when the total crop-yields were considered as freight for railroads and steamers. That was the prevalent public mood.

The present public mood is shown by the following proclamation by the Governor of Virginia:

SEED CORN PROCLAMATION

WHEREAS, the production of corn in sufficient quantities means plenty of cattle and hogs, and plenty of cattle means plenty of grass and hay and a considerable increase of improved lands; and

WHEREAS, good crops of corn must largely depend upon the seed used: and

WHEREAS, by experiments published in circular ninety-five, issued by the Seed Laboratory of the United States Department of Agriculture, the average germination of Virginia corn is greater than in any other State in the Union; and

WHEREAS, the time is approaching for the selection of seed for the next two years, as it is always desirable to have seed for one year ahead:

Now, therefore, I, William Hodges Mann, Governor of Virginia, do earnestly request the farmers of the State to thoroughly inform themselves upon this most important matter, and while the corn is in the field to select seed for

the next two years, and if crops permit, for sale to their less fortunate neighbors and to people in other States.

I suggest that corn selected for seed be taken from stalks eight or ten feet high, free from smut or disease, bearing two or more ears about four feet from the ground. The selected stalks should be marked and left in the field until the corn is dry, then shucked and put in a dry place protected from rats and mice.

During the winter, from the corn marked in the field, the seed corn should be carefully selected; the ideal ear is nearly cylindrical in shape, tapering only slightly from butt to tip; the butt should be abrupt, the rows of corn should be straight and compact, commencing close to the shank and extending clear over the end of the cob to the tip.

These suggestions are made because frequent experiments have demonstrated that good seed corn very largely increases the yield.

Given under my hand and the Lesser Seal of the Commonwealth at Richmond, this third day of September, in the year of our Lord one thousand nine hundred and twelve, and in the one hundred and thirty-seventh year of the Commonwealth.

WILLIAM HODGES MANN.

By the Governor

B. O. JAMES, *Secretary of the Commonwealth*

It is a long way from one conception of the farmer to the other; and the journey from one to the other reveals a prodigious change in public thought. How healthful the change is it were useless to say.

SIDE-LIGHTS ON FOOD PRICES

THE food consumed by New York City costs, at the railroad and steamer terminals, 350 millions of dollars a year; but when it gets to the consumers' kitchens it costs 500 millions a year. The New York State Food Investigating Commission has made a study of the food supply of the biggest city, and reaches this conclusion, among others.

The high cost of food in a large city is beyond doubt due in very large part to the chaotic and uneconomical system of handling which it undergoes. The New York Commission, after careful investigation, charged this increase of 45 per cent. in the cost of New York's food to waste and not to excessive profits. It proposes reformed methods of food distribution, which it believes would save the city at least 60 millions a year. Every city is a problem by itself, and the New York Commission's recommendations might be of small value to other places. But there can be no doubt that the local distribution of food, almost everywhere stupidly indirect and wasteful, is a factor of expensive living that well deserves looking into everywhere.

Of general interest, however, are many of the Commission's observations respecting the habits, preferences, and idiosyncrasies of the people in relation to the cost of their food. Everybody knows, of course, that the people who buy by telephone pay the highest price and get the least for their money, but this investigation has brought out the fact that the telephone has generally increased prices because it has multiplied deliveries. The housekeeper who used to make out one daily list nowadays seizes the 'phone and sends in an order every time she thinks of anything she wants. She always wants immediate delivery. The delivery system now adds from 5 per cent. (in the case of the big store) to 15 per cent. (in the case of the corner grocery) to the cost of the article. The sensible proposal is made that enterprising grocers and butchers give a coupon, redeemable in goods, for every purchase taken away personally.

The New York Commission believes that the extraordinary price now charged for steaks and chops is traceable to the increase of small apartments, without cellars or pantry room, and to the gas-stove. City people living thus soon forget that there are such things as roasts and stew-meat.

They forget, too, that food can be bought in bulk instead of in cans. Of canned goods the Commission has a good deal to say. Last year the canned goods trade of New York City was almost 150 millions of dollars. Canned goods are expensive. They sometimes run 10 or 12 ounces to the pound. Package goods average 40 per cent. more in cost than the same goods in bulk. The trading-stamp adds 3 per cent. It is, of course, an unmitigated nuisance and an expensive folly, but many people in this world like to think they are getting something for nothing.

More foresight in buying goods in bulk and in buying personally instead of by telephone will save money for the householder. A coöperative marketing association with the neighbors would save more. Fewer deliveries and fewer commercial frills like trading stamps will save money for the retail dealers. Behind all this, in New York and in most other cities, comprehensive facilities for efficient food distribution are wofully needed.

THE NEW HEALTH CONSCIENCE

DR. McLAUGHLIN of the Federal Health Service is authority for the estimate that at least 25,000 persons in the United States die every year from typhoid — a greater sacrifice of life than the bubonic plague or cholera causes in the Orient, and a far greater economic loss. And it is a national humiliation that this loss in the United States should be so very much greater than in European countries. Thirty-three cities of northern Europe with a population of 31,500,000 had an average death-rate from typhoid over a recent period of $6\frac{1}{2}$ in every 100,000; and 25 American cities with a population of 20,000,000 have had a recent annual death-rate of 25 in every 100,000.

The economic loss caused by typhoid cases that are not fatal — the weeks of illness and the cost of care and nursing — are estimated at 100 millions of dollars a year.

All this because of a disease that can be prevented mainly by sanitary control of the water supply; and, this failing, now by inoculation.

The local health-officer in many communities is a country doctor without power — till an epidemic breaks out — without vigilance, and without the habit of doing things. The general ignorance of danger is a disgrace to what we call "education." From the country home, where the pig-pen has been carefully built so that it will drain into the well, to the cities on our great lakes, the lack of knowledge, of care, of regulation, of authority, are relics of the primitive period of thought when disease was regarded as a direct visitation of God for our sins.

We have been giving much time and thought these months to a great political campaign to decide who shall be President — a matter well worth while, of course; but it is of much less importance who shall be President than what safeguards shall be thrown around the public health. The giving of compulsory vitality to every health-officer in the land and the choice of the best man in every community for that office and the enactment and enforcement of good health-laws would mean a greater gain to the happiness and to the economic welfare of the people than the election of any man whatsoever to the Presidency.

Fair questions for every man to ask himself are such as these:

What are the sanitary conditions of my water-supply?

What is the law under which I live that ensures the public health? Who are the men with power to enforce these laws? Are they doing their duty?

II

There is now enough knowledge of sanitation and of the prevention of disease, if it were applied, to take many of the risks out of life and to add very appreciably to the average of its duration; and there is no more useful work than getting this knowledge put to use. Such big meetings as the International Congress of Hygiene at Washington and the Conservation Congress at Indianapolis, each with its exhibits, help; the magazines and newspapers help; everything helps that brings these facts home to the people. But the old-time conventionalities still hold us captive. For example: if you see a man hurt by an accident, you will instantly run to his rescue and you will call a doctor without a moment's delay. But you will look at an insanitary outhouse on a road that you may travel every day and you will never feel at liberty to tell the owner the danger he runs, nor will you think of calling a sanitary officer's attention to it. Most of our codes of conduct are based on the old-time theory of disease as a dispensation of God — till something sudden happens, such as an accident or an epidemic.

The medical profession is very rapidly changing its attitude to the public. The

number of public lectures, exhibits, articles, and meetings to put the great facts of preventive medicine into practice that you will recall during the last few years far exceeds the number that you can remember in all your previous life-time.

But perhaps the greatest single agency of instruction and publicity is the school. The compulsory attention to pupils' health that has become the law in many communities is waking up the people. Preventive medicine is making its way, too, into the curriculum of the schools. More and more this must go on till the teacher become a practical sanitary expert and the activities of every school begin with health and — end with it, too. For you cannot make a better course of study than by working out such a scheme of instruction and of living.

A PRACTICAL CYCLONE DETECTOR

FATHER JOSÉ ALGUÉ, director of the Philippine Weather Bureau, has perfected a device by which the approach of cyclonic storms can be detected while they are still five hundred miles and several days away. Of course such a device is of enormous value, especially to the shipping interests, but also to all cities and agricultural regions which, like the Philippines and the West Indies, are subject to violent wind storms.

Barocyclonometer is the name of the instrument that Father Algué has invented. In it he has combined the familiar uses of the barometer and the weather vane. But he has gone farther: he has found — and applied the knowledge — that the air and the wind have special habits peculiar to different places. In the Philippines, for example, a certain normal air pressure may be expected at one season and a very different normal air pressure at another season; and these normal pressures are quite different from those in Japan. The normal direction of the wind also varies. Hence, a certain fall of the barometer in the Philippines at one season means something quite different from the same fall at another season and it means still something else in Japan.

Father Algué's barometer is simply specialized to indicate correctly the meaning of changing air pressures in the Philippines only and for the current season. When this barometer, so adjusted, indicates the approach of a storm, the wind disk of the barocyclonometer is consulted. This disk also is specialized, by an exhaustive analysis of an enormous amount of data, so as to indicate the normal direction of the wind for a certain region and what the variations of this wind are at every point in the circle of a cyclonic storm. These variations are so exactly known that the chart of them indicates at once exactly the point of the compass at which the centre of the cyclone lies and approximately its distance from the observer. Periodical observations will therefore reveal the direction in which the cyclone is moving, thus enabling mariners to steer out of their path and cities to protect themselves against them.

At the request of the United States Government, Father Algué has recently been studying weather conditions in the West Indies so that he may specialize his instruments for use in that region. If results as successful as those already achieved in the Philippines can be obtained in the Atlantic, property worth millions will be saved from destruction.

ON LAND AND SEA AND IN THE AIR

MR. THOMAS A. EDISON has perfected a home electrical generating plant which he hopes will make the detached householder independent of public service corporations by putting all modern electrical conveniences within reach of even the most isolated houses. There are two parts to this plant; an extremely simple gasolene engine, which runs without attention just long enough to charge a capacious set of storage batteries, when it automatically stops; and a device which maintains the current pressure on the distributing wires at a constant and safe voltage. In a model house in Llewellyn Park, near his laboratory, Mr. Edison uses one of these plants to light, heat, and

cool the house, to do the cooking and washing, and to serve such minor convenient purposes as to heat curling irons and water for shaving, to sterilize the tooth brushes, to run the phonograph and the home-size moving picture machine, and to charge an electric blanket that is useful in the treatment of rheumatism. A complete plant of this kind costs from $500 to $3,000.

Another recent Edison invention is the trolleyless trolley-car. One of these cars, operated silently and efficiently by storage batteries, has been carrying passengers for a year or two on the Twenty-eighth Street crosstown line in New York City. Since this was written, entirely successful trials of these cars in trains were made on the Long Island Railroad.

Whenever the casual observer will take the trouble to delve a little below the headlines of the day, he will find in trade and industry the evidences of the ever productive brains and energy of commerce. A day or two before the storage battery train's trip by land, there arrived in New York by sea the *Christian X*, the first motor boat to cross the Atlantic Ocean. It is propelled by an explosion engine which uses as fuel a combination of compressed air and crude oil, highly expanded, instead of the more common gasolene vapor. No stokers are necessary, and only ten men are required in the engine room, though the vessel is 370 feet long and carries 7,400 tons cargo. The voyage from Hamburg to Havana was made at an average speed of 11 nautical miles an hour. The *Christian X* carries 1,000 tons of fuel oil — enough to last for a cruise of 100 days. The elimination of excessive machinery permits an extraordinarily large cargo for a vessel of its size, and leaves room for sumptuously capacious passenger quarters.

And these new inventions on land and sea are accompanied by corresponding progress by those whose work is in the air. The British Government is negotiating with the Marconi Company for the erection of a series of high-powered wireless stations by which it can communicate around the world without reliance upon cables. The plan is to locate stations in Egypt, and at Aden, Bangalore, Singapore, in Oceania, on the Fanning Islands, Vancouver, Glace Bay, Clifden, and London. Each station will cost $300,000, exclusive of site, and the Marconi Company will receive 10 per cent. royalty upon all public business for twenty-eight years after the first six stations are completed. France has a similar undertaking in hand, the stations now being erected or proposed as follows: Madagascar, French Somaliland, Pondicherry, Cochin China, New Caledonia, French Guiana, and others.

But the uses of wire have not disappeared with the perfection of wireless. An old problem — how to make a non-corrosive copper coating upon steel wire — has probably been solved commercially by the Duplex Metals Company, of Chester, Pa. A steel ingot is pickled in muriatic acid to remove rust, is subjected to a molten copper bath that forms an iron-copper alloy, and is then placed in a mold and covered with melted copper which hardens and completes a process by which the copper covering is securely welded to the enclosed steel ingot. This ingot is then rolled into commercial wire, nails, etc., without altering the relative thickness or destroying the coherent relation of the two metals. This invention is of great value in all industries where wires are needed to withstand weathering and yet have great strength.

FOREIGN STUDENTS IN THE UNITED STATES

AMONG the regular students at American colleges and universities during the year 1911–12 were 4,856 from foreign lands.

Of this number 3,983 were undergraduates; 249 had been graduated here and were pursuing further studies; 624 were graduates of foreign universities doing graduate work here.

The constituency of this group of young men who had come to the United States to study is interesting. Naturally, we find that the neighboring countries sent many: Canada 898, Mexico 294; the West Indies 698. It is gratifying to know that 549 came from China and 415 from Japan.

There were 123 Filipinos who ought to take back to their countrymen a better understanding of the United States, whether or not they acquiesce in its policies toward their native land.

The 21 Koreans who will return to their unfortunate land ought to be equipped to do something for its elevation. These are all understandable. But what are 143 young Germans doing away from their own universities, popularly reputed the world's most enlightened centres of science and philosophy?

It is probable that a few hundred of the foreign students in our schools are here through chance, but, these eliminated, the number, probably four thousand, who come to the United States to equip themselves for work in their own countries, promises much for the influence of our ideas upon the rest of the world, a better understanding of this country abroad, in Europe and in the Far East.

A CHRISTMAS WARNING

A LITTLE shopping now and then during the next month is easier than an orgy of buying just before Christmas. The leisurely selection of Christmas presents makes their purchase a pleasure rather than a chore. It gives some opportunity for the thought which should be a large part of every present. These are reasons enough, but above and beyond these, as the Consumers' League points out, considerate buying now will lessen the terrible strain and grind that makes Christmas a dread to the tired women who serve in the stores.

A WORD TO YOUNG NOVELISTS

NEVER before in history has there been such fertility of literary expression as now finds voice in print. In fiction, especially, is this true. The earth and the seas have been explored for new scenes, the possibilities of human action have been strained to provide new plots. Out of such amazing effort and such diversity of talents, why does there come no masterpiece, or so few masterpieces, if you prefer?

Probably this idea points toward the answer: The heart has gone out of most modern writing. Novelists have always written for glory and for gain. How many of them nowadays add to these incentives, as Dickens and Thackeray added, the joy of writing about characters whom they love? How many novels of the day make you believe that their authors had any affection for the children of their fancy? How many characters in recent fiction cling to your memory as dear friends?

You grieved when Sidney Carton went to the guillotine. Would you care much if all the heroes of yesterday's tales were carted to the block?

Why should you care? If we may believe our senses, most novels nowadays are not written to make you care. Clearly, some authors are writing to dazzle you, some to amuse you, many — very many — to teach you how society ought to be reorganized, some to prove that Socialism is a blessing, some that the suffrage is a curse — anything and everything except to make you sympathize with the joys and sorrows of the folk who people their pages. This is the day of the man with an idea, and remorselessly he rides it roughshod through our fiction. In other days he wrote a pamphlet or a tract: to-day he writes a novel.

And modern criticism glorifies the novel that "makes the reader think." Now, the blunt truth is, it isn't the business of fiction to make people think. Its true purpose is to make people feel. And emotion is not aroused by the brilliancy of an intellectual thesis, but by the depiction of human beings in action under such moral strain as makes them exhibit the truths of human nature — its aspiration, its disappointments, its weaknesses and nobility. Men and women, not "reforms" or "ideas" — these are the substance of great fiction.

So this is written as a plea to young novelists: do not write us sermons or political arguments or social tracts. Write us the history of human hearts. Think less of plots: think more of characters. Brood over the possibilities of the human spirit, and create for us men and women whom we may love, pity, or hate. Do not

try to regenerate the world: help us to understand it. Do not fear but that the preachers will take care of religion and the statesmen of the state. Stay where you belong; where you can be of infinite service, especially in this day of prepossession with material things — by tending the garden of the heart. Give us more Portias and Brutuses, more Pamelas and Tony Lumpkins, more David Copperfields and Colonel Esmonds. This is your peculiar and priceless service to the world.

A CORRECTION

THE WORLD'S WORK in a recent comment on the change in people's minds since the days when men fought each other because they disagreed about the interpretation of Biblical texts, referred to the International Bible Students' League as "an orthodox" body. The League is not regarded as an orthodox body and by request of several orthodox ministers this correction is gladly made.

INVESTING FOR INCOME ONLY

AN INVESTOR from up-state New York came to this department not long ago with the criticism that it talks too much about prices and market fluctuations.

"Why," he said, "I have been an investor for nearly forty years and I don't believe I have ever paid any attention at all to prices or market values except when I was buying something or when I was selling something, and I have sold so seldom as to make it a curiosity.

"When I buy anything, I know perfectly well that it may fluctuate in value, but that does not bother me if I am satisfied that I am going to get my income regularly and my principal when it comes due. After all, what I buy is simply an income and I don't want to be disturbed by comment or suggestions based upon the temporary fluctuations in price in the markets."

In recent years, there has been a considerable growth in investment for income only; and a very large number of investors throughout the country now care little, if at all, whether their securities are listed on the stock exchanges and whether they know exactly at what price they could liquidate their fund at any given moment. This tendency is sound. Profits through the buying and selling of securities are just as uncertain as profits in buying and selling any other form of merchandise. The pursuit of profits is either a business pursuit or a speculative pursuit. It does not belong in true investment at all.

Of course there has been a great deal of abuse of this fundamental principle. Right after the panic of 1907, a great many pamphlets and circulars were distributed in this country, which had as their text the theory that unlisted and unmarketable securities were intrinsically much better than listed and marketable securities, because they had not fluctuated widely in price during the panic of 1907. The only thing the matter with this theory was that the reason for this non-fluctuation consisted in its having been quite impossible, during the panic, to sell this class of security at all, and there had been therefore no record of sales at low prices. When it was absolutely necessary to make a sale, the sale was usually made at what could almost be called a slaughter price. It happened that this department had a bona fide record of the sale of the bonds of one of the largest companies that used this argument, at a price nearly 50 per cent. below the offering price. That was a real panic sale of what is technically known as an unmarketable bond.

The theory, therefore, that bonds of a quiet market are very desirable investments if they are good enough in their intrinsic qualities has its limitations. A bond is nothing but a promise to pay interest periodically and principal sometime in the future. Suppose that a bond

has twenty-five years to run and that it is an "unmarketable" bond that must be held until maturity before the holder can get rid of it at a reasonable price. There are many millions of dollars of such bonds in the country. Usually they are sold direct to the public by the company which makes them, without any intermediary banking machinery. Now this bond is merely a promise to pay a thousand dollars twenty-five years from now without recourse in the meantime. The editor of this department does not believe that that is a security at all, in the proper sense of the term. No money institution in the civilized world would knowingly make such a loan. Because mortgages are something like a loan in which the lender has no recourse before it matures, the term of such mortgages on real estate is usually limited in most civilized countries to five or ten years, except where the borrower agrees to pay off a certain amount every year. All commercial bills in every country are even shorter, a full year being a long term for such bills. The idea of lending for twenty-five years without the ability to assign, sell, or in some way convey the security in the meantime would strike any banking authority as preposterous.

It is easy enough, in buying for income only, to avoid this kind of buying. No banking house of high standing will care to lend its name and credit to the sale of any long-term security for which it does not expect to find or to maintain at all times a reasonable market. Very few of the old line or even of the best modern banking houses ever recommend the purchase of bonds or stocks which have not some sort of market

Undoubtedly the staple security for investment for income only is the direct first mortgage on real property. Such mortgages should not run for too long a time and they should be secured at a reasonable percentage of true value, on property with which the lender is either personally familiar or about which he has satisfied himself by adequate inquiry. Furthermore, such mortgages should be bought under circumstances that pretty well insure the interest being paid promptly and there being no expense in collecting. You cannot collect the interest on a mortgage as you do the interest on bonds, by simply putting the coupon in the bank and having it credited as a cash deposit.

Next after the mortgage in desirability one would probably class the old established bonds secured by first mortgage on property which has other larger mortgage debts or very substantial stock issues, the interest and dividends on which cannot be paid until the interest on the old bond is paid. These are called underlying liens. They are never easy to find when you want them; but usually a good variety of them can be obtained in odd lots by intelligent inquiry in the market, and such inquiry will well pay for the trouble you take in making it.

Bonds of this sort may be railroad, industrial, public utility, or real estate bonds. It does not make much difference what they are, provided there is a very big volume of security back of them. To illustrate the class referred to, it is well to cite an extreme case. Out in the Middle West there is a traction company which has outstanding several million dollars of bonds and stock. There used to be an old mortgage of about $1,500,000 on the principal part of this property, but when a reorganization was made it was provided that these old bonds had to be retired when they could be found. In the last few years they have all been retired except about $40,000. This little fragment of $40,000 remains outstanding as an absolute first mortgage on the entire property. Occasionally one or two of the bonds will drift into the market and be snapped up immediately by investors or by the new company itself. The holders of these bonds have much more than ample security, assured interest, and an instantaneous and strong market.

This extreme case illustrates all the points that are necessary to illustrate. In the first place, the total value of all the outstanding bonds and stocks of the property is, let us say, more than two million dollars. In other words, there is a margin of $1,960,000 over and above the face value of the old bonds that are out. This is what is called an equity

in relation to the old bonds. When a banker tells you that a certain bond issue has an equity of so much behind it, he means that the market value after those bonds have been paid is so much. The real security of the bond is measured by the proportion that this equity bears to the total bond issue. In this case the equity is forty times the bond issue. If the equity is twice the bond issue, it is probable that the bonds are good.

In the case cited, the company earns every year from four to five times the total amount of this old bond issue. That is another criterion to gauge the value of a bond. Usually in a railroad or public utility company, bankers are satisfied with earnings that show two or three times enough money to pay the annual interest and sinking fund.

Next in this list of bonds for income only, come good first mortgage issues on properties that are not big enough to create bond issues in eight figures. Usually there is not an active every-day open market in any bond issue under five million dollars; and it is exceptional to find an active market in any issue under ten million dollars. But of course there are hundreds of bonds on properties that are not big enough to make an open market issue, which are intrinsically just as strong as any of the big issues. As a rule, they can be bought at lower prices, for marketability itself adds to the price of a bond under normal circumstances.

This is the big field in which a man can get a solid and safe income and a reasonable degree of marketability. If a man has an honest and capable banker with whom he does business, he will be able to get a great variety of such bonds from which to choose. He will insist, of course, that the issue is big enough to have some sort of market so that in an emergency he can either sell the bonds or borrow on them. He can get railroad, public utility, industrial, or real estate bonds according as his fancy and education dictate. He can get them running for a long time or a short time as he pleases. He can get them located in his own state or in any other state or country that he likes. He can get them paying interest in whatever months he pleases. All he needs to do, in fact, is to tell his banker exactly what he wants within reason and he will get it.

That is the big, wide market in which the man from up-state, who does not care about prices, and the thousands of other men who are working toward the same frame of mind will find their most satisfactory medium for investment. It grows faster than any other section of the investment market; and critics agree that this is because it is the market which caters most directly to true investment principles.

SHAKESPEARE PLAYED BY PEASANTS

HOW AN ENGLISH VICAR AND HIS FRIENDS PRODUCED SCENES FROM "JULIUS CÆSAR" AND "A MIDSUMMER NIGHT'S DREAM" IN A GARDEN WITH BERKSHIRE VILLAGERS FOR ACTORS

BY

VICTOR L. WHITECHURCH

THE somewhat bold idea of producing scenes from Shakepeare to be played entirely by amateur actors, many of whom had never performed in any kind of theatricals, emanated from a little private society we had formed for the reading of Shakespeare. In our particular part of Berkshire are a number of isolated villages, separated from one another by some miles' interval. The rector of one of these villages, the Rev. A. T. Gill, a man of considerable elocutionary power and experience in Shakespearean lore, suggested to me and a few others that we might make a pleasant

variety during the winter by meeting at each other's houses once a month for the purpose of reading a play and enjoying an informal meal afterward. A modest little society of friends was thus formed, plays were chosen, and parts allotted each month; we sat round a room, book in hand, and endeavored to throw ourselves into the spirit of the play as we read our respective parts. As the season went on, it was evident that we had a certain amount of talent among us, and we became inspired to further efforts. We had intended to dissolve the society at the close of the winter; but as spring drew near, our fancy turned to thoughts of a real performance of some of the scenes we had been reading. At first the difficulties appeared to be enormous. We had no buildings except our village schools, and they were far too small; no funds to lay out in costumes and scenery — and we wanted many more actors and actresses than our little coterie boasted of.

A PLAY IN A RECTOR'S GARDEN

The first obstacle, however, was surmounted. It was the age of "pageants" just then, and we determined to perform in the open air. Mr. Gill had a garden admirably adapted for the purpose, a large lawn for the audience, and a sort of natural stage in the shape of a raised, grassy embankment, at the end of it. The next point was the selection of a couple of scenes which would suit the surroundings. We were ambitious enough to wish to portray both tragedy and comedy, so we chose the forum scene from "Julius Cæsar" and the scene from the "Midsummer Night's Dream" in which Bottom and his company perform their immortal interlude before the Duke and his court. With some trepidation we pressed into our service a few village men, a carpenter, a gardener, etc., to help form a "crowd" for the Cæsar scene and to take parts in the interlude. Some of us volunteered to have our costumes made at home and we hired others. We played the two scenes twice each on the appointed day, and charged admission to each performance.

It was a very modest attempt, but our audiences gave us great encouragement and, both at rehearsals and performances, we learned many things which spurred us on to a far greater effort and far greater results the following summer. Perhaps one of the chief things we learned was the thoroughness of Shakespeare's understanding of the Anglo-Saxon character, what it is capable of, and what it appreciates. The bulk of our audiences were people — simple villagers many of them — who had never read Shakespeare nor seen him played; yet the great Forum scene appealed strongly to their imaginations, and the roars of laughter which greeted the "interlude" showed how keenly the great Playwright had gauged the wit of his countrymen. But what surprised us still more was the remarkable sense of the inner meaning of the scenes shown by the village men who acted in them. Our "crowd" was small, but its members very soon learned to display real feeling at the orations, and to break in with their exclamations as citizens with magnificent effect. As actors in the "interlude" they proved themselves to be the genuine rustic performers whom Shakespeare must have had in his mind when he wrote the "Midsummer Night."

ENLARGING THE SCALE

Our preparations, therefore, for our performance the following summer were made on a far larger scale and with attempts at results which we had not thought possible before. A fête in aid of a local nursing society was to be held in the beautiful grounds of Lady Wantage at Lockinge, Berkshire, and the Committee of this fête voted us a sum for our expenses, on the condition that all our proceeds should go to their charitable object. The choice of the "theatre" was left to us, and we selected a spot which provided a natural, sloping amphitheatre for the seating of the audience, in front of which was a broad grassy "stage," with trees and water in the background and shady avenues as "approaches." This gave us plenty of space to arrange spectacular processions as large as we pleased. The music, we decided, should be furnished by a band of instrumentalists hidden by the trees on the further side of the water—a position

exactly opposite to that usually occupied by a stage orchestra, and it turned out to be a singularly happy location.

The next consideration was the choice of what we should produce. For pageantry it seemed to us that no better scene was available than that which we had already played, viz., the forum scene from "Julius Cæsar"; but this time we decided to produce it on a far larger scale. For the other scenes, we wished to take advantage of our truly sylvan stage and fairyland surroundings, which were adapted admirably to certain portions of the "Midsummer Night's Dream." This took a great deal of careful thought, but after long deliberation, much of which took place on the actual spot between Mr. Gill and myself, we evolved a continuous if curtailed drama.

HOME TALENT COSTUMING

The question of costumes was a huge one, especially as we determined to hire as few things as possible from the theatrical world. In fact, all we actually hired for our performance were the ass's head for Bottom, a centurion's costume, a standard-bearer's head-piece, and a few wigs. We were fortunate enough to obtain the voluntary services of an authority on costumes of different periods. He spent much time in designing the costumes with a careful color scheme for each play, and for weeks the ladies of our circle were pressed into willing service, purchasing material and making the dresses. We "extemporized" all we could. We became quite adepts at the art of making sandals or quaint footwear out of old boots and shoes, slashed and painted. We even had recourse to the village blacksmith who, from our costumer's designs, made admirable armor and helmets for Roman soldiers out of ordinary sheet tin; and formidable looking spears were manufactured from the same material fixed to painted broom handles. The most difficult costumes to design were those of the four principal fairies — Cobweb, Mustard Seed, Moth, and Pease Blossom; but they were worth the trouble, once they were successfully finished, as were the dresses of the other fairies — twelve little boys for elves and twelve little girls for fairies. Perhaps the most ludicrous of all the costume "properties" was the immortal Cæsar himself, who appeared only as a corpse on his bier. He was composed of three parts — a plaster face and breast made by one of the company, appearing horribly death-like and bloody when Antony raised the pall, a sack full of straw for his body, and a pair of stuffed Wellington boots to give the proper outline to his lower limbs under the sad purple covering.

VILLAGERS IN PEASANT PARTS

We drew our company from the surrounding villages — all sorts and conditions of men. For the rustic players in the "Dream," with the exception of myself who played Bottom, all were genuine village men; and among our soldiers and "crowd" we had a number of agricultural laborers. Rehearsals were a grave difficulty. For the most part we could only meet after work was over for the day, and many of us had to cycle or drive eight or nine miles to rehearse. But we divided things — a special evening for training the "crowd," another for the fairies' dance, another for the rustic players, and so forth, with a full rehearsal of the whole company whenever we could get them together, and a dress rehearsal or two with the "band" in attendance just before the great day. We could never have done it at all had it not been for the enthusiasm of all the members of our company and the keenness with which they threw themselves into their parts.

At length the day of the performance arrived and our preparations were complete. The arrangements for dressing rooms had presented difficulties. A house in the grounds however was finally set apart for the principal performers and two tents erected out of sight behind the trees for the supers. We gave two performances — afternoon and early evening, and our scenes were witnessed by nearly two thousand spectators.

ADAPTING AND STAGING "JULIUS CÆSAR"

We spent a great deal of time and thought on the adaptation and staging of our scenes. In "Julius Cæsar," the only stage "property" used was a roughly made

rostrum, covered with turf and moss to be in harmony with the surroundings. The scene opened with a fanfare of trumpets by the concealed band, and, from the distance, through an avenue of trees and shrubs, a company of Roman soldiers, with centurion and standard bearer, was seen advancing in slow march, their spears glittering in the sunshine. In due order the men, one after another, fell out of the ranks, stationing themselves in a semicircle round the back of the stage, where they remained fixed and immovable — an impressive, martial array.

The "mob" distinguished itself. Hidden behind the trees it set up a confused tumult which grew louder and louder, until, by another entrance, Brutus (played by myself) and Cassius came on. The crowd of citizens raged in after them shouting, "We will be satisfied! Let us be satisfied!" Halfway across the huge "stage" they pressed, till Brutus, turning, motioned them back. Their exclamations throughout his speech were so vociferous and hearty as almost to drown his utterances.

A magnificent bit of pageantry was provided at the point, "Here comes his body, mourned by Mark Antony." To the strains of a funeral march, a procession of mourners came winding its way through the trees, the "body" of Cæsar covered with a purple pall, borne on its bier, and followed by the imposing figure of Mark Antony, played by the Rev. C. H. Gill. The procession advanced in front of the crowd and halted, the bier being set down in the middle of the stage. There was breathless silence while Brutus made his exit. The winning over of the crowd by Mark Antony was a fine piece of work, not easily forgotten; and the acting of the villagers was no less effective than before, as their shouts of impatience changed to cries of pity and grief. Siezing Cæsar's bier, they swarmed away with it, threatening, until the sounds of vengeance melted away in the distance. We cut out the last lines of the scene, and ended with the words, spoken by Antony, who remained alone upon the stage:

Now let it work; mischief, thou art afoot.
Take thou what course thou wilt.

The "Midsummer Night's Dream" required even more care for satisfactory adapting. We finally decided to produce Act III, Scene I, and Act IV, Scene I, as one scene without any interval. But, to do this in harmony, it was necessary to introduce it with a short prelude which consisted of an adaptation from Act II, Scene IV. The arrangement proved to be a very practicable one for amateurs. The prelude commenced with dumb show. To the strains of soft music entered the two couples, Lysander and Hermia, Demetrius and Helen. Puck, invisible to mortals, threw his charm over them and they fell asleep in the background of the leafy dell. Then came a burst of merry dance music, and on rushed the little elves and fairies with their Queen Titania. The dance of these sprightly immortals, with the queen in the centre, was a charming piece of child acting. Then Titania reclined on a grassy knoll and the fairies, ceasing their dance, sang her to sleep with the fairy song: "You spotted snakes, with double tongue," etc., making their exit to soft music. Oberon then entered, made his short speech, and squeezed the magic flower on the sleeping queen's eyelids. The way was thus prepared for the first scene of Act III. The rustic players came straggling on through the avenue, followed by Bottom with the roll of the "play" in his hand. The bit of acting which now took place was very funny and clownish. The broad yet soft Berkshire accent of the players was precisely what was wanted. The audience roared its approval.

The merging of the two scenes into one was easily effected. After Bottom's last speech in the first scene, Titania began with the first words of Scene I, Act IV — "Come, sit thee down upon this flowery bed" — and the scene proceeded, without any cutting, to the end. A bright touch of pageantry was arranged when "Theseus, Hippolyta, Eyeus, and train" entered. This took the form of a procession through the same winding path that the body of Cæsar had traversed, to the sound of a slow march from the "foresters' horns." The grouping in this, and all other parts of our performance, was most carefully

thought out and rehearsed with a view to color and other effects. In fact, we found the "grouping" on our large stage a very important part of our work, and many an hour we spent upon it beforehand, both over diagrams and in actual rehearsals. We found, from the first, that the chief difficulty to overcome in an outdoor performance of this nature was the tendency to crowd together too much. Proper and effectual spacing had to be rehearsed much oftener than actual words.

The scene from the "Midsummer Night's Dream" ended with the waking soliloquy of Bottom, the sole occupant of the stage after the procession had been reformed and had gone its way into the distance.

I might mention that the fête was a financial success, more than $500 having been made as profit. As far as I recollect our expenses for costume material, etc., etc., amounted to about $100, which, considering the large scale on which we produced our scenes, was extremely cheap.

I can only say in conclusion that the task of producing even two or three scenes from the great Master, by amateurs, is a great one, entailing much time, work, and patience, but that it certainly repays the efforts spent upon it. And, provided one has a small number of fairly good speakers to take the leading parts, the choice of others need not be too particular. The material, in our case, it is true, had to be drastically licked into shape, but our laborers were well rewarded.

"WHAT I AM TRYING TO DO"

A NET-WORK OF OPERA HOUSES TO COVER THE COUNTRY

BY

OSCAR HAMMERSTEIN

I AM raising my voice in the wilderness of musical America which to-morrow is to produce the world's supply of Pattis and Melbas, De Reszkes and Carusos, Wagners, Verdis, Puccinis, and Mascagnis, and Campaninis. Great natural musical talent exists in this country, and it is my present mission in life to give opportunity to that talent to develop. Incidental to that mission I plan to cover the United States and possibly Canada with a net-work of opera houses. By this means I shall be able to carry the very best of music to many who will appreciate it, but who until now have had no opportunity to enjoy it.

Where Andrew Carnegie has given library buildings and books I shall build opera houses and give music. Mine is the greater work. I shall give pleasure and build character and make of the world of my children's children a better place in which to live.

It would be impossible for any individual to do alone the great work that I have undertaken. But I have never known another response so quick and so generous as that given to my suggestion. I had expected that my demands, though of a nature comparatively childish, would arouse opposition. Instead of that they are being complied with in a manner that is pleasing. Merely as an illustration I may mention that the day after the newspapers gave the merest outline of my plans, Dallas, Tex., offered an annual guarantee of $40,000 for a single week of opera.

Perhaps one reason why the whole country has been so quick to accept my suggestion may be found in the fact that I have no secrets to conceal. I have been ready to answer any and all questions. I am willing to have commercial X-rays applied, being certain that the negative will show no defect in my plans and nothing but honesty of purpose in

my heart. While Mr. Carnegie and Mr. Rockefeller are giving of their idle wealth, I am giving to the public something that is a part of myself. I am giving my mind and my very life. They give directly in the form of money; I give indirectly in the form of my knowledge, of my experience, and of my talents — genius, if you will, for I have it. From my efforts come happiness and prosperity for others.

Grand opera is a hereditary instinct or desire, imparted from father to children. That is why the people of continental Europe are music loving. Germany, France, Austria, Italy, and Russia for a century have had the best of opera even in their less important cities. The common people over there have become acquainted with the beauties of grand opera. We in this country have not had those advantages, but Americans have a natural love of music, and a keen appreciation of everything that is great. We are a great-hearted people.

THE TROUBLE WITH LONDON

It has been suggested that, in this great opera circuit, we include London, making use of the opera house which I built last year just off the Strand. No, sir! I am done with London. Had I persisted in my attempt to build up in England a clientèle with a desire for and an appreciation of this sublime form of entertainment, it would have meant my expatriation. I prefer to use such abilities as have been conferred upon me for the benefit of my own countrymen. The English are a trifle slow as well as somewhat unappreciative. By nature they are not musical. They have had only Covent Garden, and they are content with that.

My ambition to give to every city of importance in the United States a permanent structure, in which the best quality of grand opera may be heard, comes to me after twenty-seven years of activity and experience with opera and music. I know that we have in this country thousands of voices of wonderful dower, purity, and sweetness. The possessors of these voices should have opportunity to develop them. Heretofore there has been no such opportunity, at least none on this side of the Atlantic. The result has been an evil, the extent of which few realize.

Our young men and young women, fired by ambition, have gone to Europe for education — seeking the musical training denied to them at home. Disasters have followed. Conditions abroad are nauseous. Temptations are spread before the young at every turn. Tens of thousands have gone to Paris, Berlin, Florence, or Milan; and where two or three have come through the fire alive, whole armies have perished. It will hardly be denied that I know whereof I speak.

From the Atlantic to the Pacific and from the Gulf of Mexico to the Far North, the men and women who are associating themselves with me will place, wherever there be hope of reasonable support, an opera house which will be a home of art and education. Of course, these houses will be used for other purposes than opera —grand purposes too—but my mind dwells upon the musical education of the public that will result from their being built.

Music is contagious. Wherever grand opera is sung, those who hear it are fired by an ambition to try their own voices. They are happy and they want the world to know it. Local societies will be formed for the purpose of giving amateur productions of the great operas. The cynic sneers at the amateur musician as a nuisance, but the greatest nuisance in the world and the greatest obstacle in the road of progress is that same cynic. At first these amateur performances, very naturally, will have a provincial flavor, but talent will have an opportunity to display itself, and great good must follow. Voices will be developed and artists will come into their own.

So these opera houses will not be merely places where may be produced grand opera. They will be places of musical education; they will stand for something definitely good that the public will be quick to recognize.

Then, too, there will be a broader benefit. The communities in which the opera houses will be built will have a chance to hear and see the greatest pro-

ductions of all kinds, something they have not been able to do in the past because of their inability to house them. The "Garden of Allah," a wonderful stage picture and story, after playing in New York and Chicago, was homeless. Nowhere in this country could be found a house large enough to accommodate it. It became necessary to disband the company, or so to curtail the performance that it was no longer the "Garden of Allah." We will make another failure of that sort unnecessary, and producers will have an incentive to try big things. The concert tours that at the present time may almost be said to begin and end at Carnegie Hall, will be extended to all parts of the United States.

In building opera houses in Springfield, Hartford, Detroit, Montgomery, Minneapolis, Denver, Seattle, and in other cities of similar size, I am not doing so with the expectation that each will have an opera season of twenty or thirty weeks. A season of two or three weeks, each of these cities can and will afford. I have not the means to maintain, for a single season of three weeks, such an opera company as New York, Paris, and Berlin support. And the American public will accept only the best. So my present plan offers the only logical solution of the problem.

Thus we combine ten cities, each of 500,000 population, and we have something greater than New York. We add thirty cities of less size and the result is the most perfect circuit ever formed. It is a revolution in musical affairs.

For the present, at least, I am barred from New York, Chicago, Boston, and Philadelphia. My contract with the Metropolitan Opera Company closed those four cities to me for ten years, and that contract has eight years to run. I hope, however, to be able to effect a compromise, and the move I am now making may influence the gentlemen of the Metropolitan Opera Company to change their attitude, which I can not help regarding as selfish and un-American. When I made my contract with the Metropolitan Opera Company, I was in bad mental and physical health. I was weak as the

MR. OSCAR HAMMERSTEIN

"I PLAN TO COVER THE UNITED STATES AND POSSIBLY CANADA WITH A NETWORK OF OPERA HOUSES"

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HEINRICH CONRIED

"WELL ON IN THE 'SEVENTIES I BROUGHT THE LATE HEINRICH CONRIED TO NEW YORK"

result of overwork during the most disastrous season of opera ever known — a season during which New York was called upon to patronize seventeen performances of grand opera every week. Four performances were given at the New Theatre, seven at the Metropolitan Opera House, and six at the Manhattan Opera House. We all lost a great deal of money. The constant strain told on my thinking powers and I made what many call a mistake, but what in fact was no more a mistake than is any act of a mad man.

Eight years ago I built the Manhattan Opera House which cost me a million dollars. My enemies said that I had lost my senses, declaring that New York would not support a double season of Grand Opera. I knew my public. The night the Manhattan opened it was filled to capacity, and I had not asked for a dollar in guarantees from any one. I had Bonci in "I Puritani" and Campanini conducting, and I doubt if the world ever knew a greater artistic triumph than was achieved that night. New York rose to Bonci, as he deserved. Later on came Charles Dalmores, Maurice Renaud, Charles Gilibert, Mme. Tetrazzini and Mme. Gerveille-Reache, and scores of other very great artists. America has me to thank for them.

That first season was a success, but it was heart-breaking. I had to carry it all. There was a big financial problem to be solved. There were the artists with their temperaments and their jealousies to be soothed. And worst of all, there was an unfair and altogether unnecessary attack from the outside to be sustained.

The Manhattan was established, and then four years ago I invaded Philadelphia, building in that city an opera house at a cost of a million and a quarter. I asked help from no one. I was perfectly willing

ALESSANDRO BONCI

"THE NIGHT THE MANHATTAN OPENED IT WAS FILLED TO CAPACITY. I HAD BONCI IN 'I PURITANI' AND CAMPANINI CONDUCTING"

LUISA TETRAZZINI

"LATER ON CAME TETRAZZINI, DALMORES, GILIBERT, AND MADAME GERVEILLE-REACHE"

to bear my own burdens, but I did ask for what every man has a right to expect in this world — fair treatment. I did not receive it, and my responsibilities began to weigh upon me.

Then came the disastrous season of two years ago. The New Theatre folly came upon New York. Opera was overdone and money was scarce. The Metropolitan Opera Company ran $800,000 behind on the year. I lost some money but not enough to have caused me the slightest worry had I not had so many other troubles to annoy me. At the end of the season the Metropolitan Opera Company offered to buy out all my holdings and at a time of weakness I consented, determined to turn to London, where I knew the field of grand opera to be practically unoccupied. There I put $1,250,000 into an opera house such as England has never had before.

It would not be extremely difficult to win an English success, but to do so would mean a campaign of musical education that would require more years than I am willing to give to such an enterprise. That is why I am home ready to put all

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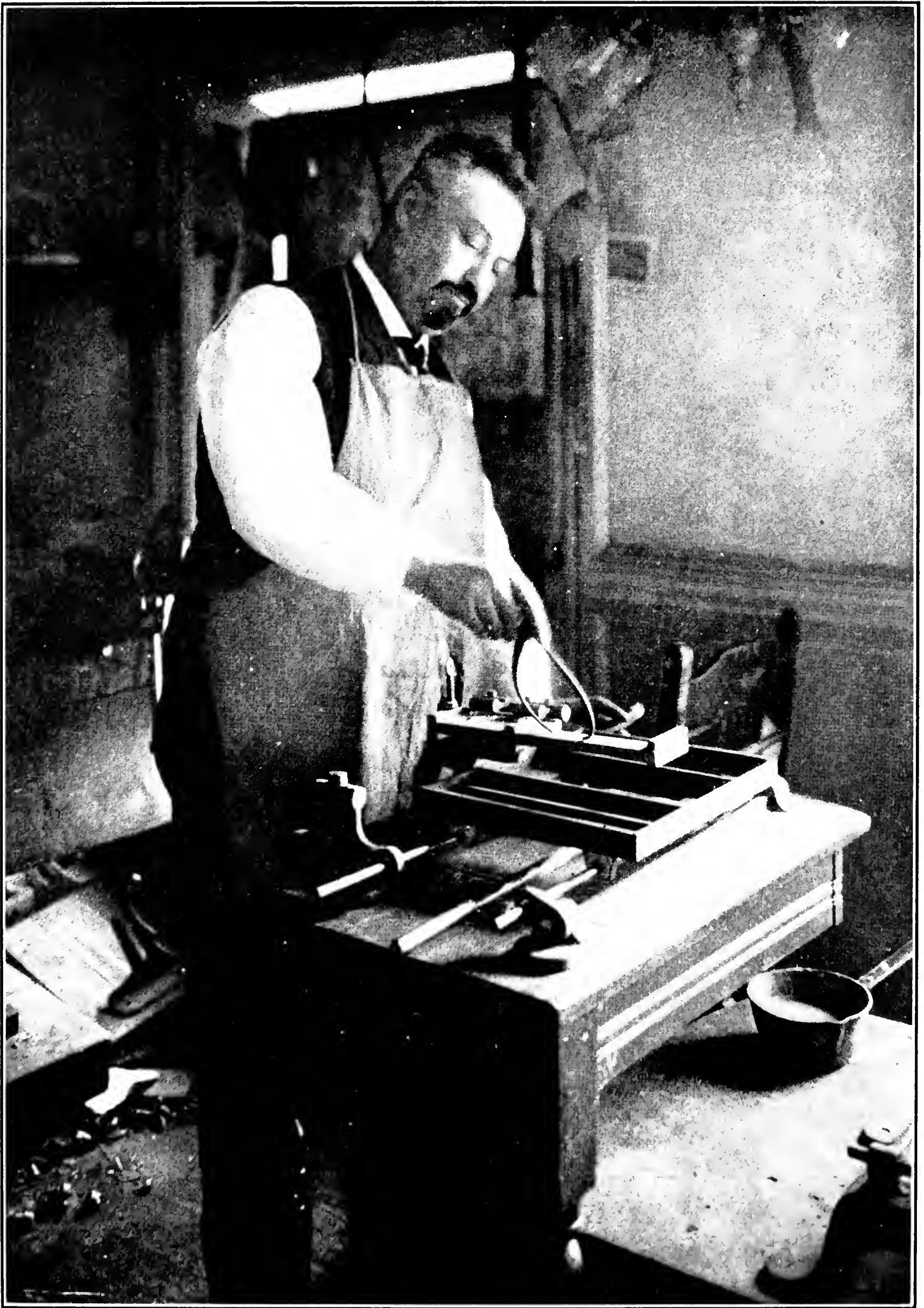
MAURICE RENAUD

"FOR THESE AND SCORES OF OTHER VERY GREAT ARTISTS AMERICA HAS ME TO THANK"



WORKING AT CIGAR-MAKING MACHINERY

"WHEN I FIRST ARRIVED IN NEW YORK I LEARNED TO MAKE CIGARS, WORKING AT FIRST FOR $2 A WEEK. MUCH OF THE MACHINERY NOW USED IN MAKING CIGARS WAS INVENTED BY ME. FROM THE SALE OF ONE OF MY PATENTS I OBTAINED THE MONEY WITH WHICH I FIRST ENTERED UPON A THEATRICAL ENTERPRISE"

COMPOSING MUSIC IN 1896

MR. HAMMERSTEIN HAS BUILT MORE THEATRES THAN ANY ONE ELSE IN THIS COUNTRY; HE HOLDS 107 PATENTS ON ARTICLES OF INDUSTRY; HE IS A CHEMIST AND ENGINEER; AND HE PLAYS THE FLUTE, PIANO, AND VIOLIN, BESIDES PRODUCING BOTH VAUDEVILLE AND GRAND OPERA

my energies into this undertaking of grand opera for all America.

Regrets for the past are the merest follies. Years ago I built what is now known as the New York Theatre and Roof Garden, and I lost it. I have been asked if I do not regret having been compelled to relinquish ownership of that property which, during the last decade, has multiplied in value. No. Why should I have regrets? If I had held on I should have had to slave to maintain that great shell of brick, mortar, and steel, and for what purpose? To enrich my children: that is all. There would have been no satisfaction of achievement. My life would have been narrowed and my mind would now have less strength and resilience than it possesses.

I am never discouraged. I don't believe in discouragement. When I abandoned London I was not cast down. I merely discovered my inability to do what I had thought I could carry out. That discovery did not fill my heart with tears or regrets; neither did it destroy my self esteem. To do anything in this world a man must have full confidence in his own ability. If I haven't confidence in myself others will not have confidence in me

Others may want to know in what way I have demonstrated my ability to carry through to success a plan so ambitious as the one I have outlined. My personal philosophy is empirical. While I am a theorist, I am never content until I have submitted theory to the test of practice. The greater part of my knowledge has come to me through experience of a bitter nature. I know I am going to make a success of this the latest and greatest of my undertakings, and I have a right to my confidence. I have been successful in business; I hold one hundred and seven patents on articles of industry; I am a chemist, an engineer, and a musician of more than fair ability. I can play the flute, the piano, and the violin, and can play them well. I have a knowledge of music and I know the repertoire of grand opera as few persons do. I can compose and have composed music of merit. In saying this I am not boasting. I am establishing a position which entitles

THE HARLEM OPERA HOUSE

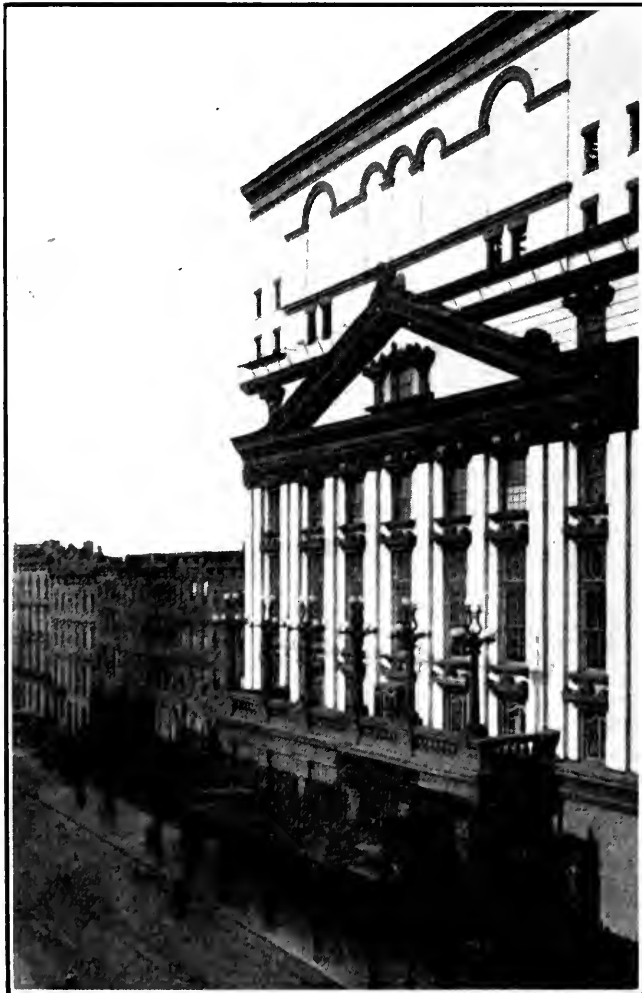
THE FIRST THEATRE BUILT BY MR. HAMMERSTEIN

me to be heard and to have my statements receive consideration.

Mine was an old-time father, cruel and brutally extreme, who took great pride in having mere knowledge pumped into his son. That is why I am a chemist, a business man, an engineer, and a musician. Had he given to me the thought and care that he owed to me in the days of my unformed youth, I should be as a man far better than I am at the present time. Had my talent been properly directed in my youth, I should have had one profession and in it I should have excelled. Had I been taught to specialize in any of the subjects to which my boyish mind naturally turned, I should have achieved great success. Had I been encouraged in my desire to give my attention to music, I should have become a celebrated musician. I love music. To me it is the one best thing in life. That is why I am trying to give to the boys and

THE NEW YORK THEATRE

WHICH CONTAINS TWO PLAYHOUSES AND A ROOF GARDEN, ANOTHER OF MR. HAMMERSTEIN'S VENTURES



THE MANHATTAN OPERA HOUSE

"EIGHT YEARS AGO I BUILT THE MANHATTAN OPERA HOUSE WHICH COST ME A MILLION DOLLARS. THE FIRST SEASON WAS A SUCCESS"

girls of America a fair opportunity to gratify their ambitions when they lead in the direction of music. Instead of giving to me the opportunity which of right should have been mine, my father, in the cruelty of his narrow mind, gave knowledge to me. He drove me brutally. One day instead of going to school I went skating. When I returned home I found my father waiting for me. He took the heavy buckled straps off my skates and with them beat me, beat me terribly, until I fell fainting to the floor. I struck my forehead against a chair and cut myself so deeply that I carry the scar to this day. My father left me lying where I had fallen, to recover as best I might.

When I came to my senses I gathered my clothes into a bundle, fully resolved to leave home for all time and for my own good. That is what took me from my birthplace in Berlin and that is what brought me to America.

I took my violin to a dealer who gave me $35 for it. With a part of that money I purchased a ticket to Hamburg, from which city I went to England. From Dover I sailed for New York on the old emigrant ship, the *Isaac Webb*, which landed me in New York late in the winter of 1865. I never saw my father again, nor have I ever wanted to see him. He nearly

whipped out of me the only possession I have that is worth while — sunshine.

When I first arrived in New York I learned to make cigars, working at first for $2 a week. My advancement was rather rapid, owing, probably, to the fact that I possessed a mechanical genius of high order. Much of the machinery that is now used in making cigars was invented by me when I was little more than a boy. From the sale of one of my patents I obtained the money with which I first entered upon a theatrical enterprise.

In the meantime I had not neglected my education, and while yet a very young man became editor of *The Tobacco Trade Journal.* While in that position I leased the old Stock Theatre opposite the Thalia on the Bowery in New York. My first theatrical venture failed because of my ignorance of human nature. I learned a lesson, however, which I have never forgotten.

In the Stock Theatre I staged a burlesque called, if my memory does not fail me, "A Knight Errant." There were several distressing scenes which culminated when the unfortunate knight was locked in a dungeon, presumably to starve to death. I had planned that, when he called aloud for food, apples, bananas, and other fruit should be hurled at him from the upper balcony. For that purpose I had some young men stationed in the balcony with their missiles ready at hand. The knight cried aloud for food, and to my horror and disgust, none came. Up the stairs I bounded into the balcony, only to learn that my employees, who had been picked up in the streets and hired for the night only, had been so overcome by the pangs of their own hunger that they had eaten the fruit which I had expected them to hurl upon the stage. The burlesque was ruined, but I learned enough to feed my actors and actresses before expecting them to do their work properly.

THE VICTORIA

MR. HAMMERSTEIN'S VAUDEVILLE THEATRE. THIS, THE NEW YORK, AND TWO OTHERS HE BUILT IN THE IMMEDIATE NEIGHBORHOOD OF TIMES SQUARE, NEW YORK

This incident, laughable as it now seems, carried with it something of tragedy. My small fund of ready money was exhausted and I was compelled to return to my work-a-day world to replenish my purse before I could proceed with my aspirations

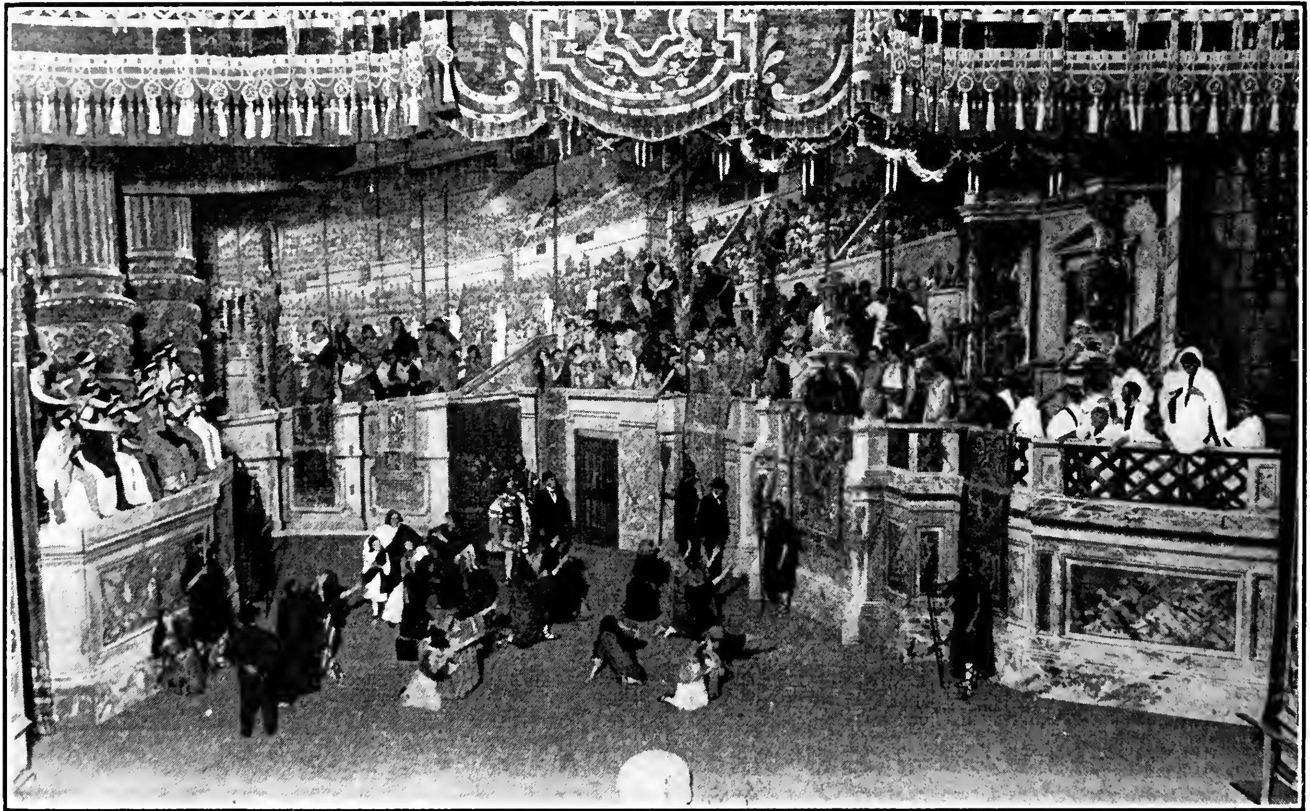
to place the stage upon a more realistic basis. My failure taught me to be more careful of details. I have never fallen into similar error. Other failures have come to me, but never because of lack of preparation.

I spent very many years preparing for the great work that I am now undertaking. I served an apprenticeship such as no other man has known. Well on in the 'seventies I brought the late Heinrich Conried to New York. He was a great German actor who developed into a very great manager. A few years ago he took over the management of the Metropolitan Opera House, and he died under the same strain that brought so much mental anguish to me.

I suppose I have built more theatres than any other man living or dead. About thirty years ago I built the Harlem Opera House. A little later I built the Columbus Theatre, also in Harlem. Then I built the Olympia — now the New York — containing two theatres and a roof garden. That is at Broadway and Forty-fifth Street, ten full blocks above what was the theatre district when the building was constructed. Men have been fond of calling me crazy, as they did then. The New York is now worth four times what it cost me.

I built the Victoria, at the corner of Seventh Avenue and Forty-second Street, as a home of vaudeville. Again I was called a crazy man, but the Victoria has been a wonderful success from the moment the first curtain was raised in it.

After the Victoria I built two more theatres in West Forty-second Street, and leased both at big rentals.



THE LONDON OPERA HOUSE

"NO SIR! I AM DONE WITH LONDON. THE ENGLISH ARE A TRIFLE SLOW AS WELL AS SOMEWHAT UNAPPRECIATIVE. BY NATURE THEY ARE NOT MUSICAL"

My life has been a busy one, but never so busy as to keep music out of my heart. My favorite recreation is writing music. In fact, I think in terms of music. My greatest problems are solved while I am listening to an orchestra.

I have just one more great ambition. When that is gratified I will say that my life's work is done. I shall be willing to rest and listen to the songs of others. As I have said, my final ambition is to carry the very best music to the great American public of whose appreciation I am certain.

THE BATTLE LINE OF LABOR

I

THE ARMIES OF THE TRUSTS AND OF THE WAGE-EARNERS — TWO WARRING FACTIONS THAT FIGHT AT THE PUBLIC'S EXPENSE

BY

SAMUEL P. ORTH

The immediate basis for this series of articles is an intimate study of the labor question, undertaken this past summer. The author visited some twenty industrial cities and towns, where he interviewed officers of national unions and local unions, and a great many laboring men, union and non-union, some out on strike, others debating whether to strike. He talked with many employers, shop foremen, and superintendents in representative industries, both "open shop" and "closed shop." He visited the Department of Labor in Washington, and the Labor Departments of several states, including New York and Massachusetts, to glean information from officers who for many years have been in close touch with the labor situation.

And finally he sought out a number of the most experienced "strike breakers" and detective agencies to hear the exciting stories of their part in this war.

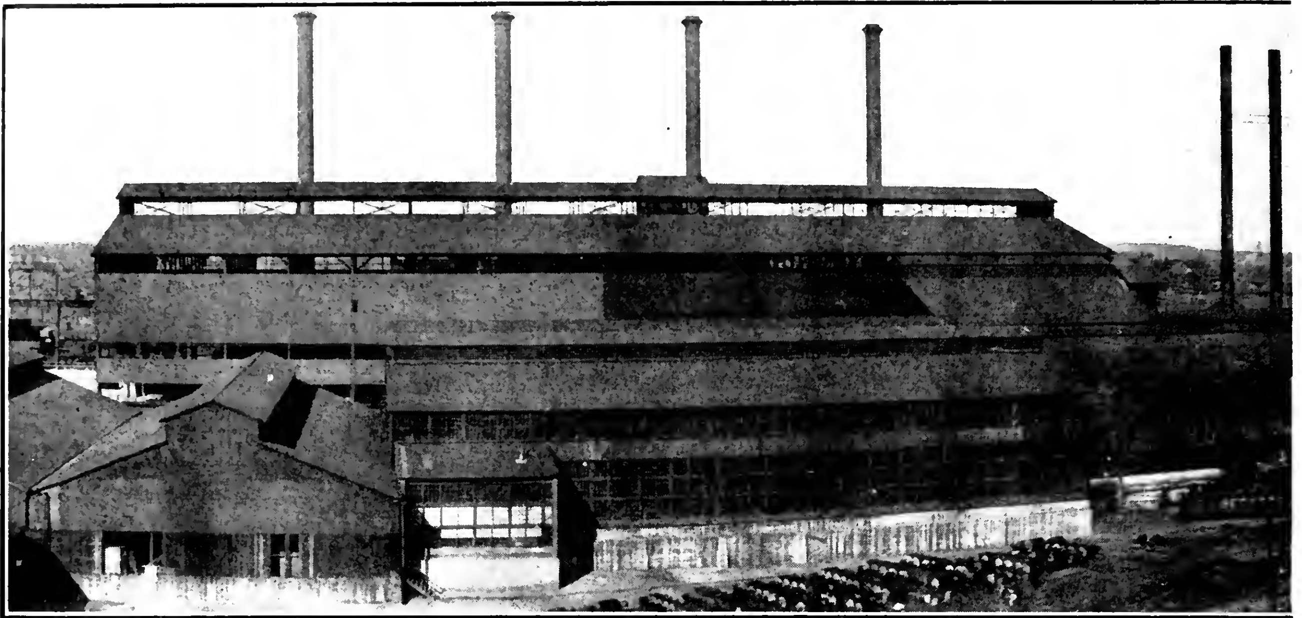
All this was done to get into personal touch with the men actually in the field. From the nature of the case, many of the gentlemen interviewed requested that their names be withheld from publication.

This series aims to be no more than a sketch of a wide field as seen and interpreted by the author. After the exhaustive discussion which every detail of the "labor problem" has called forth in the last thirty years, it is futile to hope that anything new or original is hereby added to the complex and perplexing situation.

WE MAY roughly divide our population into three general classes: the employer, the wage-earner, and the public. These classes, of course, overlap each other, but yet they are distinct. The universal muddle, usually called "the labor problem" — which is just as much an employer's problem or the public's problem — is the result of continual ructions between the first two classes; the man who hires human energy, and the man who leases his skill or endurance. These two parties are in almost constant strife. I have called it a war, and it is a war. It may be only petty dickering; it often is dynamiting, burning, slugging, and murdering.

Thousands of men have died for their country, upheld by the fervor of a patriotic zeal. We are accustomed to glorify their valor, and we decorate their graves with flowers. That is the adulation the public brings to fighting for the flag. But in this war, in this turmoil for bread and butter, there are no be-laurelled heroes, none of the pomp and panoply of war. The Belgian workmen have erected monuments on several battle-fields where strikers were shot down in their frenzied clash with the soldiery. But that is in Belgium.

Here, we, the public, you and I, sit idly by while economic tumult rages, until our own little selfish circle of activity is disturbed. Then we suddenly discover that we are the real victims of this ever-



A STEEL PLANT OF ONE

ABOUT ONE TENTH OF THE BUSINESS IN THE UNITED STATES

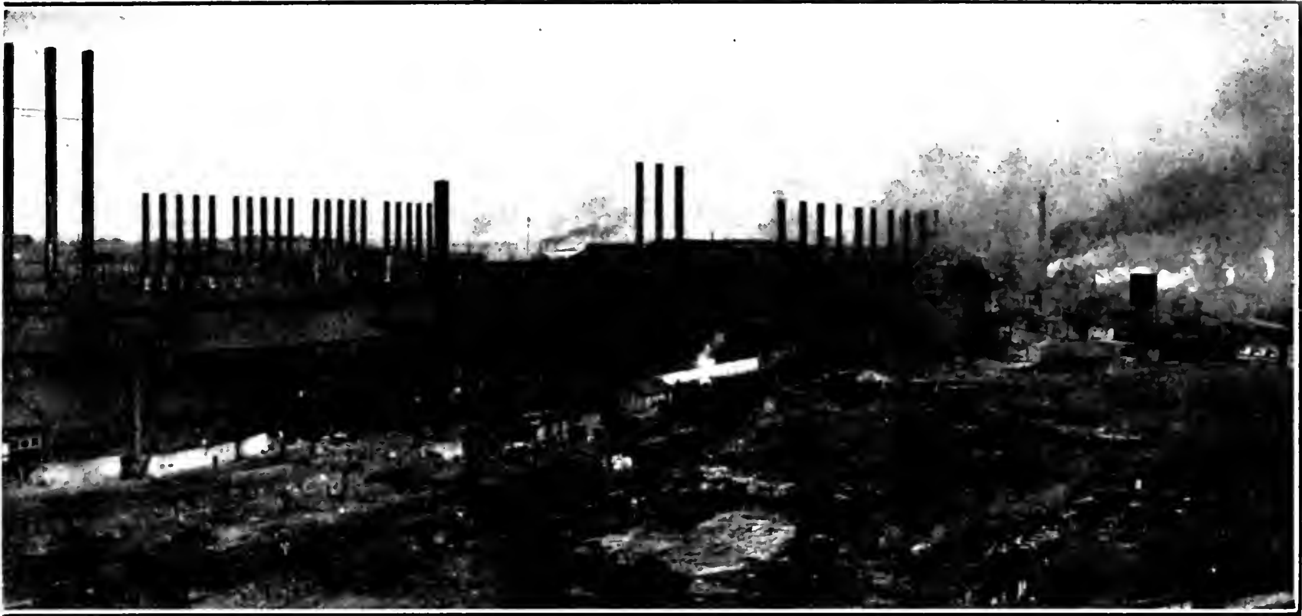
lasting give and take between the man who buys raw material and the men who shape it into marketable wares.

Let us first take a survey of the field.

From the census of 1900 we can roughly estimate that, of the 29,000,000 persons engaged in industry, 6,000,000 are farmers, and 4,000,000 are farm laborers; 12,000,000

A LITTLE BUSINESS

IN WHICH USUALLY NEITHER SIDE IS ORGANIZED FOR WAR



OF THE BIG INDUSTRIES
EMPLOYS SEVEN TENTHS OF THE FACTORY LABOR

are wage earners and salaried employees; 1,500,000 are professional persons; and about 2,000,000 are employers.

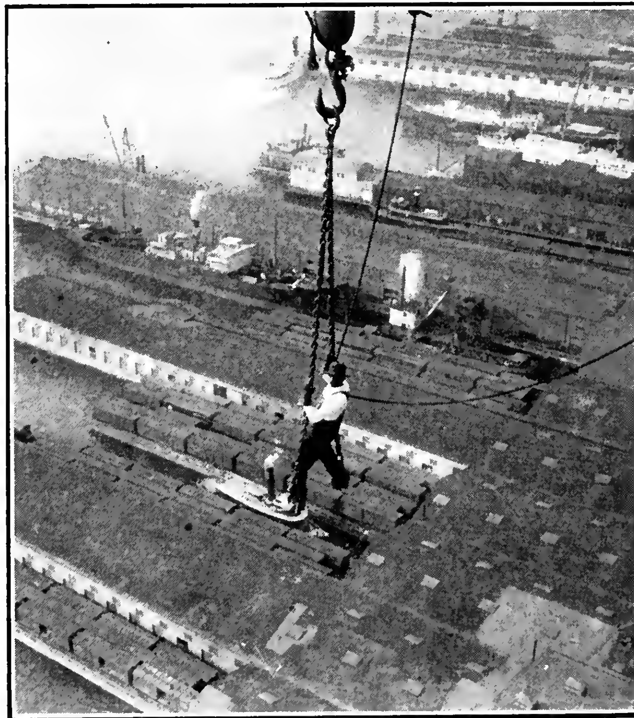
This last term is very elastic. It includes all employers of labor, small or great, individuals, partnerships, and corporations. The vast majority are merchants or small producers, who work at

A SMALL FOUNDRY
ONE OF 2,000,000 EMPLOYERS. ONLY 300,000 OF WHOM ARE IN THE LABOR WAR

their trade and with their men, employing from one to ten men, and are in constant personal relations with their help. We think we can safely say that the number of employers in the larger concerns is not greater than 300,000.

Moreover, of the 12,000,000 workmen, 5,000,000 at the most may be set aside as salaried employees and as persons working in the smaller establishments. This leaves us an army of 7,000,000 wage earners, who may be said to be working for 300,000 employers, and the majority of these employers are not human beings, but corporations.

That is to say, of our whole population in 1900, about one-third, or 29,000,000, were "engaged in gainful occupations," and of this number, the militants may be said to be 7,000,000 wage earners on one side, and 300,000 wage distributors on the other. This computation eliminates the farmer and his help, because there is practically no wage war on the land. The domestic servant, the employee of the little establishments, and the salaried employee is likewise eliminated from the controversy. A salary somehow is an industrial sedative. The "black-coated proletariat," clerks, bookkeepers, etc., often earn less than mechanics and brick layers, but they wear boiled shirts and are meekly content with their neat jobs.



A STRUCTURAL IRON WORKER

A MEMBER OF A UNION THAT HAS AN UNSAVORY REPUTATION FOR VIOLENCE

We have, then, narrowed down the forces that make the "labor problem," and they are only a minor portion of the population.

There is the large, unorganized, more or less weak, more or less soft and complaining mass, to which you and I belong, called vaguely the public. We are consumers, as is every member of society, and, in a way, we are producers. But we are distinctly neither employers nor wage-earners.

Such figures for 1910 as are available show no very material alteration in these proportions. With one significant exception: the number of individual employers is growing less, the unit employment is growing larger.

In 1905, the figures show that 11.2 per cent. of the total number of manufacturing establishments controlled 81.5 per cent. of the capital invested in manufacture; employed 71.6 per cent. of the wage earners engaged in manufacture; and produced 79.3 per cent. of the total manufactured product. *One tenth of all the business units control eight tenths of the manufacturing business of America: and seven tenths of our factory workers are dependent upon this handful of corporations for their daily bread.* The transportation systems are even more centralized. There are many hundreds of railways in the United States employing 1,700,000 men. But you can count on your fingers the number of systems that control every mile of this marvelous net-work of steel that binds our country into an industrial unity. The reports of the Interstate Commerce Commission show that every year the number of "independent operating roads," is diminishing.

There are no authentic figures, but those best qualified say that there are 500 "trusts" in the United States. These virtually control the leading industries: iron and steel, coal and coke, cotton and clay products, farm machinery and ship building, salt and sugar; whatever you wear, whatever you eat, whatever you

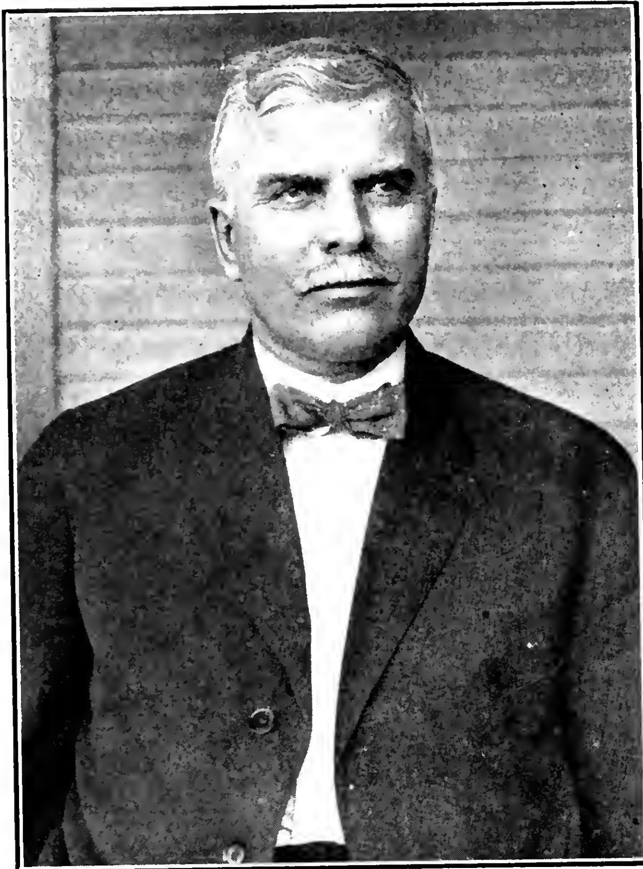
read, whether you are at work or at play, you are bound to pay a tithe to the giant who stands at the portals of industry and holds out an eager and commanding palm.

These 500 "trusts" represent the greatest division of the compact and select army of employers and they engage about one-third of the army of wage earners. The rest of the 2,000,000 employers are smaller corporations, partnerships, and individual business men — whose capital ranges between $100,000 and $1,000,000.

The corporation world is thus organized, and becomes yearly more centralized not only for controlling the markets but also for controlling labor. There are two types of organizations perfected for this labor warfare. The first type embraces such organizations as the National Association of Manufacturers. Their attitude is dogmatic in the extreme, and they even suggest the extermination of the unions. The other type is represented by the National Metal Trades Association, organized to embrace only one trade. There are such associations in several trades; stoves and furnaces, metal foundry work, machine construction, publishing and printing, marble cutting, and clothing. Some associations bargain with the unions,

A TYPICAL GARMENT WORKERS' SHOP

A TRADE IN WHICH THE UNION FORCES ARE OFTEN BADLY DEMORALIZED BY THE INFLUX OF CHEAP, FOREIGN LABOR



Photograph by Brown Bros

MR. WARREN S. STONE

PRESIDENT OF THE BROTHERHOOD OF LOCOMOTIVE ENGINEERS, WHICH IS PERHAPS THE MODEL AMERICAN UNION, COMPACTLY ORGANIZED AND WISELY LED. IT OWNS A SKYSCRAPER IN CLEVELAND, OHIO, AND HAS A PROSPEROUS INSURANCE FUND

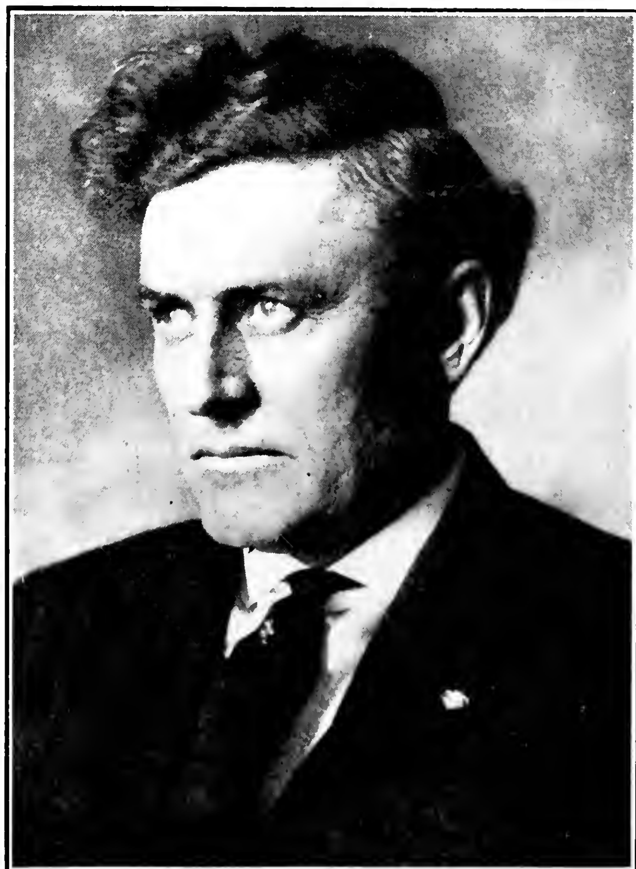
like the garment workers and the newspaper publishers. Others have dickered with the unions but have come to no agreement and are now fighting like the National Founders Association, while still others are hostile to every form of trade agreement or union recognition and want only the "open shop," — like the Metal Trades Association.

The Metal Trades Association and the National Founders Association have labor bureaus, which furnish men "without cards" to such of their members as are in need of help; they have expert strike breakers, they scout every skirmish line, know everything that is going on in their shops, have every resource of treasure and clever brains, and are full of fight.

These hostile forces have also organized the Anti-Boycott Association to conduct the legal battles against the unions. The list of members of this organization is not published. They have a vigilant and aggressive set of officers and counsel, who fought the Danbury Hat case and the Bucks Stove case through the courts. The Bucks Stove case will be of far-reaching effect upon labor legislation, public opinion, and judicial procedure. It may be the Dred-Scott case of American industrialism.

The great "trusts," the omnipotent 500, are averse to trade unions and are trying various ways of conciliating their workmen and keeping them out of the reach of the organizer. It will be interesting to see how they will succeed. The Steel Trust is now trying to ward off the mesmeric passes of Samuel Gompers and the fiery apostles of the International Workers of the World. So great is the influence of the powerful trusts that, if they are sincere and wise, they can be helpful in pointing a way out of a perplexing situation.

Opposed to this group of employers is the army of labor, the 7,000,000 who are dependent upon their daily toil for their



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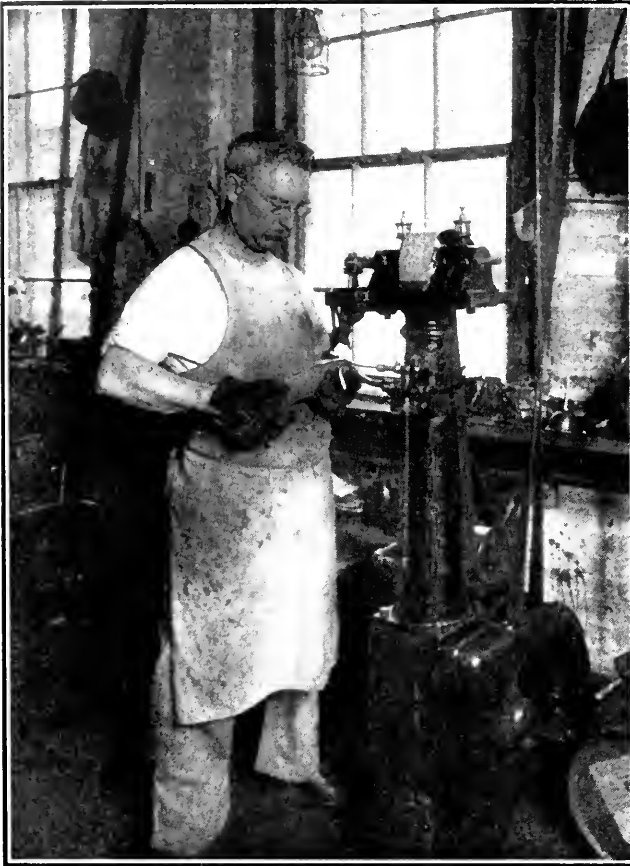
MR. JOHN WHITE

PRESIDENT OF THE 300,000 MINERS IN THE UNITED MINE WORKERS OF AMERICA. IN 1897 THE MEMBERSHIP WAS ONLY 10,000. ITS ANNUAL INCOME IS $900,000. AFTER SPENDING $1,890,000 IN BENEFITS IN THE ANTHRACITE STRIKE, IT HAD $750,000 LEFT IN ITS WAR CHEST

THE MONUMENT TO MARTIN FOX, THE GREAT LEADER OF THE MOLDERS

WHO SIGNED THE FIRST COLLECTIVE TRADE AGREEMENT WITH AN ORGANIZED EMPLOYERS' ASSOCIATION IN THIS COUNTRY. FROM LEFT TO RIGHT, JOHN P. FREY, EDITOR OF THE "INTERNATIONAL IRON MOLDERS' JOURNAL"; FRANK MORRISON, SECRETARY, AND SAMUEL GOMPERS, PRESIDENT, OF THE AMERICAN FEDERATION OF LABOR, WHICH HAS 2,000,000 MEMBERS; AND JOSEPH F. VALENTINE, PRESIDENT OF THE MOLDERS' UNION



A SHOE WORKER — A SKILLED TRADE

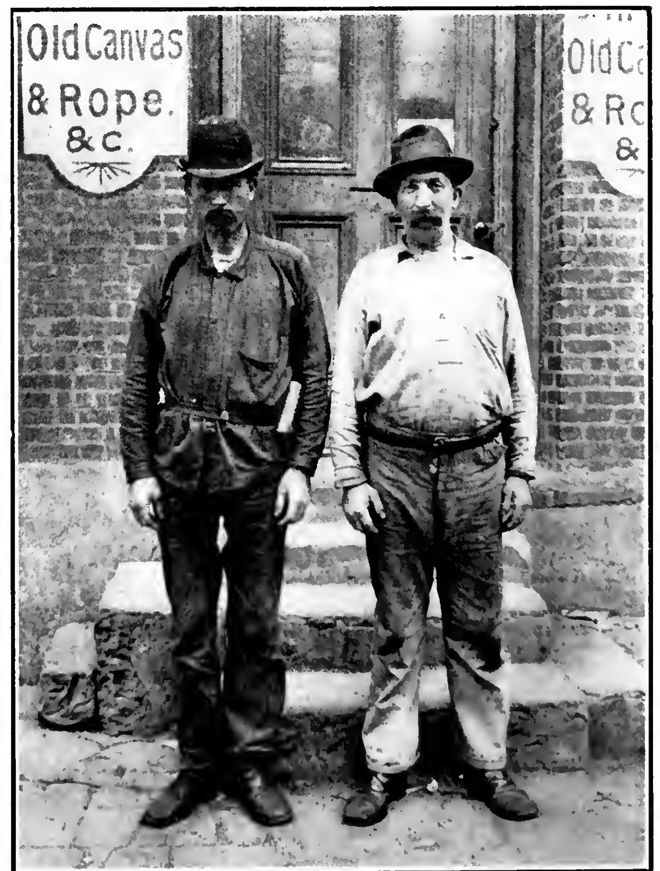
THE BOOT AND SHOE MAKERS' IS A CONSERVATIVE UNION, BUT "MY MOST DIFFICULT TASK," SAYS JOHN TOBIN, ITS PRESIDENT, "IS TO CONVINCE THE RADICAL ELEMENT THAT A CONTRACT IS A TWO-SIDED AFFAIR"

daily bread. Here too, organization is regnant. There are about 3,000,000 men in the ranks of the American Trades Unions. Nearly 2,000,000 of these are concentrated in the American Federation of Labor, a confederation of 87 national and international trades unions, 23 state federations of labor, 63 city central labor unions, 13 unaffiliated unions, and 6 fraternal organizations Imagine the power and the responsibility of the leaders of such an army. And these leaders are men who have been promoted from the lathe and the mine to places of industrial captaincy.

The Federation does not include some of the largest unions, like the Railway Brotherhoods. Nor does it include the latest development in American unionism, the International Workers of the World. This body is hostile to the principle of trades organization. It believes that the only effective way of conducting the great war is through industrial organization. "We have no piecemeal parleying tactics. When we go out, a factory simply shuts up. There isn't any one left to run it, that's all. None of your trades haggling with each other," a striker of New Bedford explained to me. These super-militants care little for truce, for manoeuvres or surrenders, excepting only the great final unconditional surrender of capital, when the new and untried era of social ownership shall replace this old and tried system of piecemeal ownership.

The International Workers of the World are strong where the trades unions are weak, namely among the foreign and the unskilled workers. The new propaganda, split by internal dissension, is not very strong in numbers. The Chicago faction have about 15,000 members, the Detroit faction probably less. But it is far from weak in ferocity of attack. San Diego, Lawrence, and Paterson will testify to their vehemence and tenacity.

All these unions embrace barely one-third of the army of the wage worker. But they are well disciplined and occupy the strategic places, the Gibraltars. They realize their power. They have organized



LONGSHOREMEN — AN UNSKILLED TRADE

IN WHICH THE UNION LACKS ORGANIZATION AND LEADERSHIP

substantially every important industry. The coal and iron that is basic in our modern speed-cursed life is handled and wrought by the unions, the lines of travel are manned by the unions. The houses we live in, the clothes we wear, and the bread we eat are all produced by the unions. The union label is the companion of the trust trade mark; both are insignia of modern industrial centralization.

Some of these unions are quite as model in organization as the trusts. The Brotherhood of Locomotive Engineers is compactly organized and has been noted for its wise and cautious leadership; and wherever I have gone I have heard from all sides words of praise for its policy of caution and firmness. When a strike was threatened on the Alton Road last spring, the union agreed to arbitrate. I attended several sessions of this arbitration at Manhattan Beach this summer, and was impressed with the sincerity of the engineers rather than with the skill they displayed in presenting their testimony. These earnest veterans, heroes of the throttle, were concise, positive, and earnest in telling their stories. They reflected the character of their union—which is well equipped with brains, money, and experience. It owns a model skyscraper in Cleveland and has a prosperous insurance fund..

Or take the Mine Workers. Of 600,000 miners in thirty-one states, one half are in the United Mine Workers of America and three fourths are under union conditions. This great mass of men is divided and sub-divided like an army, into district, sub-district, and local organizations. The miner pays 25 cents a month into the treasury, and the annual income of nearly $900,000 is carefully spent. The war chest is well lined. In 1902, the anthracite strike year, after distributing $1,890,000 in strike benefits, the organization had three fourths of a million left in the fund for the same purpose. And John Mitchell had only 10,000 soldiers in his army in 1897.

Or the Iron Molders, whose great leader, Martin Fox, was not only a tactician and fighter but a seer. He signed with one hand the first collective trade agreement with an organized employers' association ever put through in America, and with the other hand he held the sword of warning over those employers who refused to accept the new ideal of joint bargaining. I know of no other body of men who are at the same time such furious fighters and eager bargainers as this union of molders.

THE INDIVIDUALITY OF UNIONS

And so we might go through the list. I have been impressed with the individuality of the different unions and with their geographical variations. Their individuality arises from two causes: the nature of their work and the quality of their leadership. In no other cause does leadership seem to count for so much. The leader can make or break a union.

The Structural Iron Workers have an unsavory reputation for violence and brutality. The members of this daring craft wander from city to city wherever work offers itself; they have no fixed abode; their task requires the highest degree of physical courage and daring as well as a perfect eye and obedient muscle. When this kind of man fights, he is no tin soldier.

On the other hand, the cigar makers are a much milder type. This union has in G. W. Perkins a quiet, studious, conservative leader, who ruminates among statistics with gusto and advises his followers to think twice before they act. The cigar makers, during their hours of work, hire one of their number to read; and the average man unacquainted with labor would never guess their favorite authors. They are Ruskin and Carlyle! The classic aroma of many a fragrant Havana is the incense of praise to these two sages of Toil and Art.

It is perfectly apparent that the radical unions, the precipitate unions, have made less substantial progress than the conservative, careful unions. The leaders of these more deliberate organizations have their task cut out for them. "My most difficult task," said John Tobin, the wise, whole-hearted, and able President of the Boot and Shoe Makers' Union, "is to convince the radical element that a contract is a two-sided affair that permits each side to maintain its proper rights without the loss incident to strikes and lockouts." And

employers who have collective agreements with their men always tell you that the greatest obstacle to joint agreements is the radical fellow, who is usually a grumbler, a fighter, and a good talker. I was told in New Bedford by a member of the strike committee during their textile strike this year that, if the careful men in the union had been given one week more, their differences with the mills would have been adjusted. "But the hot heads are always picking at the other fellows, and making a restless and unhappy situation, and they forced the issue. Now that some of the radicals are out of town on a vacation on account of the strike, we are going to be able to settle it."

IMMIGRATION AS LABOR SEES IT

A great many strikes have been called to placate the unruly elements in the unions. The internal turbulence is always augmented by the great influx of foreigners. The average trades unionist looks with disfavor upon the European who comes here willing to work for lower wages and longer hours. "Immigration furnishes a greater menace than the trusts," avows Samuel Gompers. From his point of view, the trouble with the foreigners is that, although they join during times of trouble when strike benefits are coming in, they soon grow cool and drop out after the fighting is over.

In New England and in the great cities the immigration problem is menacing. Eighteen nationalities were compounded into a fighting mass at Lawrence last year. The constitution of the mine workers is printed in eight languages. In a fight the aliens show all the fervor that their trans-Atlantic experience in Socialism and anti-governmental demonstrations have taught them. In Chicago, during the teamsters' strike, Prof. Graham Taylor says that all the diverse elements of the neighborhood — Irish, Norwegian, Pole, Greek, Armenian, Italian—whose clannishness kept them apart and whose religious intolerance often verged on hostility, were united in their cry of "scab" when non-union drivers, under police protection, drove through the foreign quarters.

This illustrates one of the most discouraging aspects of the labor war. The unions are successful in uniting diverse elements in the interests of tumult and strife; but in the hours of peace contention often divides their councils, and the foreign workman, who should naturally look to the unions for teaching him American ideals and for helping him better himself in his craft, abandons the organization to save his 25 cents dues.

All the unions make some provision for strike benefits, most of them have sick benefits and death benefits. The cigar makers have an out-of-work benefit. But the benefit features of American unions are not well developed. The British unions are far ahead of them in this regard. And the reason is: *The American unions are primarily fighting bodies; they are organized for war, not for insurance.* Their sessions are councils of strategy, not classes in craftsmanship; their trade journals are filled with belligerent discussions and patriotic exhortations; only occasionally do you come across an article that aims to be helpful to the worker in his trade. The typographical union's oath reads, in part:

> That my fidelity to the union and my duty to the members thereof shall in no sense be interfered with by any allegiance that I may now or hereafter owe to any other organization, social, political or religious, secret or otherwise.

You cannot estimate the strength and the discipline of this organized army of labor—three million men, drilled and led, reading every week the virile editorials of their trade journals, listening every week to the fervid rhetoric of their union exhorters, seeing every day the ranks of their employers closing in, seeing the unions with war chests filled with cash and hearts filled with a stolid determination. The average man reads of strikes and other acts of outward violence. But he has no conception of the silent power of this body of men, who impress non-union workers into their ranks, and can ruin tradesmen and break hearts by being silent.

THE KINSHIP OF UNIONS AND TRUSTS

And all for the purpose of controlling the labor market. Commercially the object of the "trust" and the object of the

union are identical — to dodge the effects of rivalry. William D. Haywood, a leader in the wild scenes enacted by the Western Federation of Miners, now a propagandist in the trades unions' rival, the industrial union, said, "Trades unions are nothing more nor less than a labor monopoly. They are trusts just as much as the Standand Oil and Sugar Trust. They attempt to restrict the supply of labor, in order, as they think, to hold up wages. They attempt to dictate to the employers whom they shall hire, and how much they shall pay."

Of course, labor unions have other objects than the commercial object. They are vigilant as to every detail that affects their members: sanitation, child labor, workmen's compensation, engage their attention. But fundamentally, they are organized to fight for wages and short hours. So you see, there is a trust on the top, a trust on the bottom, and we, the public, are in between. Or, to carry out the figure, we are between the firing lines, catching the bullets from both armies.

In other words, in the last few decades both labor and capital have achieved an entirely new significance. Both have been transformed from individual units working in a circumscribed circle, into colossal masters of industrial destiny. The trust reaches every market on the globe: the periphery of the labor union's activity touches immigration, trade education, and a horde of new problems that make the old individualistic conception of employer and employee vanish into the shadows of the past.

What is the spirit of these rival organizations, of business and labor?

The first thing that strikes you as you talk with either side is the spirit of distrust which lurks in the background. Most employers think a union man *per se* must be watched; and most union men eye with suspicion any advances made toward them by the boss.

"I have about six hundred men in my employ," said a Chicago manufacturer, who runs an "open shop," to me. "They are mostly skilled, some very highly skilled, and are a good set of fellows. With most of them I am on friendly terms. But I wouldn't trust one of them, when it comes to the question of striking. They are an inconsiderate bunch, care nothing for the welfare of the business, and are looking out only for their wages."

With some show of astonishment I asked him how universally this opinion prevailed. My informant had had a good many years' experience here and abroad, among many classes of workmen, was a student of the wage system, believed that it should be modified, and displayed every evidence of trying to be an unbiased witness. "The majority of employers, who have come in actual contact with labor feel the same suspicion, especially toward union men."

The manager of a great machine shop in Brooklyn, an open shop, told me: "I don't care whether a man belongs to a union or not, as long as he does his job and keeps his mouth shut. But I have never known a man who belonged to the union to be able to keep his mouth shut. He is a trouble-maker at heart, is interested only in his wages, and looks upon his employer as a sort of enemy."

If the employer distrusts his men, how can we blame the wage earner for evincing distrust? There is a continual gloom over some workers — a pessimism, instilled by the constant ding-dong of one grievance. Even in shops that have collective agreements the men are not as open hearted as you would expect. As one of the union leaders put it: "Wages are the last thing an employer raises, and the first thing he cuts. The workmen know that; they realize that he is more than a match in cleverness and resources. There are some employers, who are absolutely beyond suspicion and want to give a square deal. But the average man is selfish, and plays his own advantage."

Secondly, the whole situation is growing more impersonal.

I have talked with old manufacturers who began business in a small way years ago and knew personally every one in their employ, and whose business has expanded until they employ hundreds, even thousands, and find it impossible to know their men. The loss in *esprit* is infinite. I have shown that the typical

employer is no longer a person, but a corporation, and alas, the typical employee is merely an abstraction of a united labor-quantity. These impersonal forces meet on the dollar plane, not on a human basis. The man is no longer Tom, but No. 765. Even worse, the stockholder is the real employer, and what does he know of his hirelings? What does he know even of the officers, his agents, who run the business for the purpose of getting dividends? This doing business by proxy is the curse of many New England mills.

Let one of the oldest men in the New York State Department of Labor tell it. "Talk about respecting personality! Many a time I've watched a building going up, and seen the foreman pick off the slower workmen like flies. 'Hey you, with the red hair,' or, 'you with the gray cap, come down, you're no good — too slow. Get your pay.' It's not a matter of humanity — it's cold business."

On the other hand, the organization of the union has robbed the workman of even his right to make a direct "kick." He must be "represented." He is merely a unit. He, too, meets the manager by proxy. The tyranny of impersonal organization is upon him.

It all comes to this: both sides are exploiters. At the same time, both sides profess their desire to be fair, and no doubt believe they are. Dr. Charles P. Neill, United States Commissioner of Labor, whose many years of experience in labor disputes has given him unusual opportunity to judge the temper of the disputants, told me: "There is no occasion to charge either side, as a rule, with unfairness. I have tried to help settle hundreds of labor disputes, and each side always asks me 'are not our demands fair?' It is human nature to want to be fair. But it is also human nature to be self-centred. Therefore, each side has an entirely different conception of what is fair. Neither controversant sees the whole problem, and neither sees it from the other side."

So we have the anomaly of an economic warfare, fought under banners of self-righteous, self-defined "fairness," without much regard for the rights of each other, and without any regard for the rights of the third great class of our population, the public.

But before I come to that, I will add that this whole controversy has been sentimentalized by the talk about "industrial peace" and the mellific phrase, "the interests of capital and labor are identical."

They are not identical. They never will be under a wage system, and the sooner the public find this out, the sooner will they be able to make the rules of war, umpire the conflict, and, in self-protection, impose fines and penalties on the malefactors.

Samuel Gompers told me, when I suggested that employers complained because the labor unions were constantly asking for more, were never satisfied: "Labor has never received its full rewards for the vast benefits it renders to society." Or, in plain words, they will get all they can. Thereby emulating the century-old example of their employers.

To put it bluntly, the "labor problem" is a human nature question. All abstractions and intricately wrought theories vanish before the profound facts of human nature, and the question comes right down to earth. Everybody taxes everybody what the traffic will bear. From this premise it is futile to seek a "solution to the labor problem." This is not pessimism. It is merely recognizing the fact that nerves, passions, instincts, reason, hope, and hunger, must be considered as elements in the game. When a workingman comes home at night and says, "Mary, I've lost my job," it is not merely an incident in the warfare of modern life, it is a tragedy. The most the law can say of it is that an individual contract has been broken. The public can say that a human heart is broken. That's the human nature side, the great side, of this question, and we shall never get far along in this matter until the public forces the human side to the foreground.

But is there then no hope for the public — the rest of us, who belong to no unions and who are too poor to be employers? Certainly. Little by little this public has pushed itself into the warfare. But on the question of wages and hours, the

two vital questions to the "wage-contract," it has held quite aloof.

Both sides have ignored us. The employer has told us over and over again that he is perfectly capable of taking care of his own business. And labor: well Mr. Gompers admitted to me that "without public opinion, the way of the labor reformer is hard." Secretary St. John of the I. W. W. said plainly, when I asked him what would become of the public in the "death struggle of capital," "The public will have to take care of itself."

Isn't it time the public were taking care, not only of itself, but of the combatants? How can it take part in this war of wars, help straighten out this muddle of muddles, with benefit to all? This we will try to disclose, in the course of the discussion through succeeding chapters.

GOOD TIMES COME AGAIN

ALL OVER THE UNITED STATES

WHEN all the ninety and more millions of people in this country have plenty of work to do it is a sign of prosperity that it is hard to discount.

About thirty millions of the ninety, and the most important thirty millions, this fall have been just as busy as they could be harvesting bumper crops. There are now no signs of lower prices for farm products, and that means that the efforts of the 30,000,000 Americans on the soil will be well repaid and that they will have money to prove to the manufacturers again that they constitute the best market on earth.

Elsewhere in this magazine are the figures of these wonderful crops and the opinions of such widely-known agricultural experts as Mr. Henry Wallace and Mr. Eugene H. Grubb.

The presidents of the railroads which have to haul the produce bear testimony to the fact that these good times on the farms will keep the railroads busy. The business of transportation employs about 1,700,000 men, and they are all busy, and they and the other five or six million dependent upon them will have money to spend.

President McCrea, of the Pennsylvania Railroad, is quoted in a jubilant interview in the New York *Sun*:

Prosperity — why, it is here. Everybody can see that. The pulse of the whole country is beating to the rhythm of happier times, and we are just entering the new era of prosperity.

So far as the outlook for cars for the whole country is concerned it would be impossible to predict. But for the Pittsburg region I will promise the supply of cars will be ample to move the great tonnage created here.

This problem of car shortage depends upon several factors. First there is the question of the ability of the farmers to store their grain. When they are not compelled by financial stress to realize upon it quickly there is not the rush that suddenly brings an acute situation in car distribution.

Farmers have not had such bumper crops in years. If there are storage facilities in their own bins or in their local elevators for the bounteous crops — and I think there are this year — another factor in car shortage is removed. However, regardless of any car shortage, our national prosperity is on the boom, and in my opinion will continue for a long period.

President Brown, of the New York Central, reiterates the same sentiment, emphasizing, however, the fact that the crops are so large that the railroads will have a hard time to handle them.

The United States is going to see, during the next year, the heaviest business in all lines in its history. Crops of all kinds from the Atlantic to the Pacific Coast will be perhaps the most abundant of any year in the history of the country.

The traffic in sight is going to tax the ability of the transportation lines to the utmost.

Of the old South, President Finley of the Southern gives a favorable report.

The Harriman Lines are a fair criterion of the Western railroads. When the chairman of them, Judge Lovett, returned to his office recently after a month's trip through the West, he said:

"I have never known crop conditions in that section to be better. I don't know how they could be any better. Business for that reason is unusually fine and the outlook excellent. Labor is very scarce and much of our work has been retarded on that account, particularly new construction."

In the railroad world there are jobs for everybody. The six or seven million who depend upon it will have money to spend.

The next great industry is lumber. Two thirds of a million men work in its manufacture. As Captain J. B. White, of Kansas City, tells elsewhere in this number, the saw mills and lumber yards from one coast to the other are active. The lumberjacks and mill workers will have money, too.

There is plenty of work for the 300,000 miners in the country. The steel mills are behind their orders. Two months ago the unfilled orders of the United States Steel Corporation were larger than at any time in the last five years. And so on from one industry to another. Everywhere that a man wants work there is work for him to do; that is the bottom on which prosperity rests.

"HOW'S BUSINESS?"—EIGHT ANSWERS

A SYMPOSIUM OF OPINION OF LEADERS IN THE COMMERCIAL AND PRODUCING LIFE OF THE UNITED STATES WHO ARE UNANIMOUS IN THE BELIEF THAT THE COUNTRY IS ENTERING AN ERA OF EXCEPTIONAL PROSPERITY

GOOD IN SPITE OF POLITICS

BY J. B. WHITE

(PRESIDENT OF THE WHITE LUMBER COMPANY)

PEOPLE in every generation sing of and wish for the "Good Times Coming," but seldom stop and count their blessings to find that they have already come. The price of pig iron used to be the guide for some, and the price of pork used to be the barometer for others. When these commodities were high, then there was a market for other commodities, and there was an advance all along the line to a higher level of all values. There was frequently no apparent analogy between the price of pig iron and the price of the farmers' pigs. Yet the sentiment of "pigs is pigs" was in effect the shibboleth shouted throughout the land, and the new period of prosperity was ushered in.

Some gentleman in Cincinnati published several editions of a booklet claiming to show a logical reason why the market prices of pig iron and pork should be taken as a national basis for the market prices of everything else. Yet there were some that laid their troubles to Wall Street and in periods of depression shouted for currency reform, which they immediately forgot and laid aside for some other hobby when their fortunes were again in the ascendency. Others laid the cause of depression to politics and would say that they wished we had our presidential elections only once in six or eight years.

The farmer calmly walks over his farm in this 1912 year of good crops and good prices, and is not himself worrying over the high cost of living or the cost of high living. He knows that his beef, pork, and mutton cannot be lower in price for several years — not even through reciprocity. For Canada is now as hard up for this class of food stuffs as we are. It will take six or eight years to get a sufficient increase in the number of food animals so as to affect materially the price of meat, so long as the demand of the table continues for veal, lamb, and the young of

other species. So he no longer fears political parties, and he knows a demagogue at sight. Time was, when he would take off his hat to his Congressional servants in both the Democratic and the Republican parties for the protection he enjoys from a tariff of 6 cents a pound on butter, 6 cents on cheese, 5 cents a dozen on eggs, $4 a ton on hay, $1.50 a ton on straw, 25 cents a bushel on wheat, 35 cents a bushel on barley, 15 cents a bushel on potatoes, etc., and an almost prohibitive duty on live stock and meats. But in this presidential election, he is happy, and looks complacently on — an interested participant as a voter, but not a bitter belligerent in the political struggles of the day. He is prosperous this year; he realizes it; and he is busy making improvements, and buying lumber and other building materials, thus bringing prosperity to other industries.

The lumberman depends upon the farmer; he is prosperous when the farmer is prosperous. To-day the demand has caused advances in building material until lumber is back at the price obtaining just before the panic of 1907. Yet the farmer can buy more lumber with the produce of his farm — with the price of a mule, or of a steer or a pig — than at any time within the last thirty years. If lumber should remain at present prices, there is a greater reason for it than for most other commodities; for it takes two or three generations to grow a crop of trees; and at the most the lumberman can harvest only one crop in a lifetime.

On the farm we should practise conservation of the soil and its products. In the forest, in the mills, and everywhere we should reduce waste to the minimum, and conserve all our vital and material resources, everything pertaining and conducive to health and to the moral and physical efficiency of human life.

We should all love our work that there be industry without exhaustion, economy without meanness, frugality without parsimony — wisely discerning that which is good, that there be a sufficiency for all. As the Scripture says, "there is he that scattereth and yet increaseth; and there is he that withholdeth more than is meet, yet it tendeth to poverty."

The writer has individually some strong political opinions, but has not expressed them in the above letter. The custom of greatly exaggerating the importance of Presidential elections, as to their influence in bringing or destroying good times regardless of crops and the other conditions, suggested to me the treating of the subject in this manner, and I treat the Nation's farmer in the singular number and his views in the abstract, not taking into serious account partisan politics; because the farmer, like the laborer, the manufacturer, and the business man, belongs to all parties, and each is a separate industrial force, depending largely upon each other in social and material progress.

ON THE THRESHOLD OF PROSPERITY

By WILLIAM C. THORNE
(VICE PRESIDENT AND GENERAL MANAGER OF MONTGOMERY WARD & CO.)

In my opinion, we are on the threshold of prosperity and good times, due, in addition to natural conditions, to the fact that the people as a whole have discovered that nothing has been the matter at any time in the past few years. They are waking up to the fact that all the clouds on the horizon were imaginary and that underlying conditions justified prosperous times and existed continually and steadily — but the fact of their existence was obscured by a feeling of unrest and disquiet which had no real cause.

The political pot has boiled over. Every one has been worrying about it and in previous years there has been a period of unrest and indecision until the campaign was settled one way or another. We are very glad to note that the times are such and conditions are so stable that the political situation is of less importance from a business standpoint than has been the case in previous presidential years. I am convinced that almost everyone is of the opinion that the country will go on and the wheels will keep on turning and prosperity and good times will prevail, no matter who is elected.

The crops, of course, are tremendous This situation means the circulation of large sums of money through channels

that are normal and healthy — a condition essential to continued prosperity.

So far as our business is concerned, the indications based upon reports which we have had from all sections of the United States are that things are looking up. It seems to be a unanimous verdict, which is unusual in the year of a presidential election, and it tells very plainly that all hands should wear a cheerful smile and attend to our daily affairs as earnestly and hopefully as we know how, with prospects pointing indisputably to a period of good times ahead.

THE BIGGEST BUSINESS YEAR

By E. C. SIMMONS

(CHAIRMAN OF SIMMONS HARDWARE COMPANY)

The best way to advise your readers about business is to recite conditions with us, as we have seven houses, which are located in different sections of the country so as to cover the entire United States. Our army of traveling men visit every state in the Union and they make us weekly reports, in a systematic way which has for many years been arranged for them, so as to give us the information we want. From every section come the cheering words of bountiful crops, hopeful feeling among the merchants, and a great demand for goods, to an extent that is taxing the resources of every one of our houses to execute the orders promptly and satisfactorily.

The goods we deal in are not those of fashion or style, but of utility. They are needed on the farm, by the mechanic, and in the household. The number of orders we have received during the last thirty days is unprecedented. The kind of goods called for indicate the building of many houses and barns — in fact, the demand for barn hardware, such as barn door rollers, rail, etc., far outstrips anything ever known before, and many of the farmers appear to be giving their first attention to the building of new barns to take care of the enormous crops.

The greatest pressure upon us for goods comes from the Northwest to our Sioux City and Minneapolis houses, which supply chiefly the trade of Minnesota and the two Dakotas. And also the Philadelphia house, which has had great tribute from the Atlantic Coast, from the City of Philadelphia to Florida, inclusive. An interesting feature of the business is that more new stocks are being purchased than ever before. This clearly indicates the starting of many new enterprises, return of confidence to the people, and a healthy condition of finance. For five years, business has halted and has been under a considerable depression from various causes, well known to every intelligent man. These causes now appear to be removed to a great extent or sidetracked.

Usually at this period, before a presidential election, people have their minds diverted into political channels, but not so at present. Under the head of "what the people are talking about," our salesmen report to us that they are taking little or no interest in politics. They refuse the seductions of the "silver-tongued" political orator or demagogue or the muckraker. The conversation or talk is chiefly upon the great crops and the prosperity that must follow. It is my opinion that this almost unprecedented demand for goods will continue for a year or more, and almost certainly through the year 1913.

Already we are experiencing great difficulty in obtaining merchandise enough to supply the demand. Many of the factories are away behind with their orders and are asking us to anticipate our wants as far as possible, and, although it is quite early yet to feel the effect of these good crops, it is noticeable that the freight service is not as good as it was four months ago. The railroads are all overtaxed and they are doing their level best to prevent congestion and delay.

I believe that if the Interstate Commerce Commission would permit the railroads who need it to make a slight advance in their freight rates, it would round out and finish everything that is lacking to bring this country back to a state of prosperity far surpassing anything before known. And why shouldn't they? It seems to be only fair when the Government, by its new laws, has increased the operating cost, that they should permit the roads

to increase their revenue sufficiently to meet this increased cost; and, after all, the money that we pay to the railroads is simply a method of distributing widely and wisely the money for employment and good wages among the working people.

FULL CROPS AND FULL PRICES

By HENRY WALLACE
(EDITOR OF "WALLACE'S FARMER")

Good times, so far as the farmer is concerned, have been coming for fifteen years, or ever since the exhaustion of the supply of good Government lands watered by the rain from heaven came in sight. Since then lands have been advancing in price somewhere between 7 and 8 per cent. per annum in the corn belt and the price of farm products in about the same proportion. World consumption has now overtaken world production; and for this reason we have passed the time when a bumper crop brought in fewer actual dollars than the one half or one third crop. We are therefore reasonably assured of the continuation of good prices for an indefinite season.

The crops of small grain already harvested are somewhat in excess of the average, due to the drouth of last year, which left the soil after the abundant fall rain in superior physical condition, followed by a blanket of snow west of the Mississippi, and that by about the normal rainfall in the grain producing sections, and favorable weather during the critical period of blooming. Barring an untimely frost in the corn belt, the corn crop will be among the largest ever grown.

The farmers — the largest single element of our population — enjoy this year both full crops and full prices; and as their wants, like the wants of all other classes, increase with their ability to supply them (barring calamity which mortal vision can not foresee), an amount of business may be confidently expected that will tax, to their utmost capacity, our systems of transportation, and also the ability of the banks to extend the needed credit.

Fortunately the uncertainty pending the result of the presidential election will check wild speculation — more to be feared in times of general prosperity than earthquake, drouth, or pestilence. The amount of serious thought necessary to cast an intelligent ballot will sober the general public, and we are likely to pass through this quadrennial agony with less than the usual disturbance of business.

In short, the farmers, speaking generally, have the stuff the world must have, and for which, through steady employment, it is able to pay a fair price. With farmers prosperous and spending, as they always do, in proportion to their prosperity, we may confidently expect good times for the next year.

NO LET-UP IN PROSPERITY

By JOHN G. SHEDD
(PRESIDENT OF MARSHALL FIELD & CO)

Return of prosperity?

To say that there has been a return of prosperity would hardly be correct as applied to the wholesale and retail drygoods business for, strictly speaking, there can be no return of a condition that has not been absent. Speaking for our business in so far as it pertains to the manufacture and distribution of drygoods, both wholesale and retail, we have found no good reasons to complain of conditions for several years.

So long as the factories which we own and the manufacturing plants whose entire output is absorbed by us are kept working steadily for twelve months in the year, we cannot say there has been any lack of business. The pressure on our North Carolina blanket and gingham mills as well as at our Zion City lace and lace curtain factories has been very great and has necessitated the running of some of our plants in double shifts, or eighteen hours per day. This condition of steady employment for thousands of workers in the factories and manufacturing plants supplying our company applies alike to our wholesale and retail distributing business.

While I have said that there has been no "return of prosperity," it is a fact that the indications of the present point

strongly to an increase of activity. The good times which have been and which are with us to-day show no signs of abating — quite the contrary. As to the future, splendid results already are assured in the way of abundant harvest which is presaged by reports from all over the western, central, and southern states. These farm products will be needed in vast quantities by Europe, which must look to us for much of its supply. This means an influx of money and that is one of the basic causes of prosperity. We should under such circumstances, experience a continuation of that prosperity of which no other country has an equal share.

THE PROMISED LAND

By E. H. GRUBB
(AUTHOR OF THE "POTATO BOOK")

From the generous earth of 1912, every product of the soil has been prolific. I think that the corn crop will be a record breaker. The oat crop is away beyond anything that we have ever had before. Wheat, notwithstanding early adverse reports, is approximately a maximum crop. The like of this year's fruit crop has never been grown before. These are the things that everyone has noticed. But the greatest crop of all is not often mentioned. The grass and forage crops are unprecedented. And grass is king, not cotton or corn. Little thought is given to the greatest revenue producer of the whole world — plain grass. Its wealth can not be estimated. What it is worth as hay and forage is but a part of its value, and the smaller part. It covers, protects, and enriches the soil. The abundance of grass means better crops for the years to come, for it insures that fertility and soil condition that insures plant food.

Such are the crops that are being harvested to fill a grasping market.

More than this, I believe that this is but the first good year of many. Not that I am prophesying about the conditions of the weather, but I see the improving condition of the man on the soil — and the realization of his importance by the people he feeds. We are taking the prejudice off the land. The National Government and the state governments are doing more than ever before for agriculture. The American Bankers' Association has associations in thirty states at work trying to improve agricultural conditions. The railroads now have agricultural departments just as they have freight and passenger departments. And the heads of the railroads are vitally interested in these things. Better men are going into farming, more capital is seeking the land as an investment. This bountiful year is at the beginning of an era of better things.

GUIDE POSTS IN THE SOUTH

By JOHN M. PARKER
(OF NEW ORLEANS)

The guide posts of Prosperity are everywhere apparent. Clearly the nation is on the road to better times. The crops will probably bring the farmers more actual money than ever before. The factories and the mills are busy. The nation is fighting for clean politics, good government, and a square deal for everybody, and a fresh start on the way toward the achievement of the vision of a greater and better nation has been made. In all of which the South, the New South, is marching in the front rank of the well conditioned army of prosperity. There is no parallel in history to the wholesome expansion of the material affairs of the South during the last few years. Yet the change that has come over things south of the Ohio River — the increase in the banking and trade facilities, the awakening of the land owner to the possibilities of his soil, the insistent demand for deep and well provided harbors and for the reëstablishment of water-borne commerce — is merely a manifestation of the preparation the people are making for the great development that is to come.

TEN BILLIONS FROM THE LAND

BY GEORGE M. REYNOLDS
(PRESIDENT OF THE CONTINENTAL AND COMMERCIAL NATIONAL BANK OF CHICAGO)

During the past ninety days there has been a gradual and constantly increasing activity in all kinds of business.

Iron, steel, and subsidiary lines were the first to feel the impetus of growing business, but as time has passed and crops have matured, there has been a marked development in the volume of business in all lines. This increased activity reflects a greater prosperity, and the fact that the intense political agitation through which we have been passing during the last ninety days has had no deterring effect upon the increasing volume of business indicates a stability of prosperity which is very gratifying.

The widespread agitation of a more scientific use of the soil has directed the attention of the masses of the people to the great possibilities for increased production, as well as a better quality of all that our soil produces, and since the question of the stability of our prosperity depends so largely upon the yield from the soil, the effect of this agitation is bound, in the long-run, to be reflected in a more voluminous business and a greater prosperity in all parts of the country.

It is estimated that the value of products of the soil, including live stock raised, for 1912, will be nearly if not quite ten billions of dollars, and the direct influence, upon business, of a general knowledge of this fact has accelerated the activity in business, notwithstanding recent political agitations that may possibly result in the election of the candidates of a party which may make radical changes in our tariff and other laws.

If a wise course shall be followed in the enactment of laws at Washington, which will result in giving us adequate currency and other legislation, and if there is a continued and greater dissemination of the information about the conservation of the fertility of the soil, thereby assuring a material increase in the yield of the products of the soil, I see no reason why the large measure of prosperity which we are now enjoying should not only be continued indefinitely, but be augmented in proportion to the increase in wealth which we are able to secure by more scientific farming.

THE COMING PROSPERITY

A NATION-WIDE BROADENING OF INDUSTRIAL AND COMMERCIAL ACTIVITY THAT MEANS WORK FOR ALL AND, UNLESS CHECKED BY UNFORESEEN DEVELOPMENTS, SHOULD INAUGURATE ANOTHER PERIOD OF GOOD TIMES

BY

EDWARD NEVILLE VOSE

(EDITOR OF "DUN'S INTERNATIONAL REVIEW")

AT THE time when the effects of the economic depression that began in 1907 were most noticeable, a serious effort was made in many parts of the United States to create a feeling of optimism by artificial means. We were told to "look at the doughnut — not at the hole," to join an "endless chain of prosperity boomers," to "boost for better business" — and so on. These well meant attempts to lift ourselves by our bootstraps failed — not from any lack of sympathy with the cause, but for the reason that the intangible element in the business atmosphere that we call confidence cannot be manufactured.

To-day the feeling of confidence, of buoyant optimism as to the future, that was so notably absent in 1909, has unmistakably returned. In spite of the fact that this is a presidential election year — traditionally a period of dullness and uncertainty — the onward movement has begun. How long it will continue and how far it will carry us are matters of guesswork, but the facts as to the present situation and the present trend are sufficiently clear and, as far as they go, full of encouragement.

The last official report of crop conditions indicated that five important crops — corn, oats, barley, flaxseed, and hay — would probably surpass all previous records; that three — rye, buckwheat, and rice — would be equal or close to the largest ever reported; and that the production of winter and spring wheat would exceed that for any other year except 1901 and 1906. Seldom, if ever, has there been a more favorable showing of condition for so large a group of agricultural staples simultaneously. The outlook for the 1912-1913 cotton crop is also exceedingly encouraging, although a repetition of the record-breaking crop of the past season is hardly probable. Taken as a whole, therefore, indications point to harvests of remarkable proportions in most staples and of generous size in all, while foreign reports indicate a world situation likely in the main to favor satisfactory prices. A year of prosperity for the American farmer will mean abundant activity for those who supply his, at present, widely diversified requirements.

Looking below the surface of this year's tremendous crops in two widely separated sections of the country, a permanent influence for better farming is beginning to make itself felt. One of the special features favorably affecting the agricultural country around Atlanta is the spread of diversified farming, which enables the farmers to live more on their own produce and thereby reduce the cost of growing cotton. A similar story comes from the great agricultural district tributary to St. Paul and Minneapolis. The years 1910 and 1911 were both bad years. Up to this time the wholesale houses had carried the country merchants along on credit whenever there was a poor harvest — a relic of the one-crop days. In 1910 and 1911 the wholesalers bent every energy to break up this custom. The result was that the country merchant bought very little and cleaned up his old debts.

This fall finds more diversified farming than ever before. The wheat crop is large and the coarser grains and corn have broken all records. The Northwestern farmer is finishing perhaps as good a year as he ever experienced, marketing a record-breaking crop at high prices. The country merchant with stocks low and debts paid is ordering from the jobbers faster than they can supply him — as satisfactory a condition as could be.

IRON AND STEEL RECORDS

In the industrial field increasing activity is everywhere apparent. Iron ore shipments on the Great Lakes in August and September were the largest on record, and for the season will probably surpass the highest total previously reported (42,618,758 tons) by two or three million tons. Pig iron output is growing steadily and, though in recent months the output as reported by the *Iron Age* does not break all records, it seems likely that the total for the year will do so by more than 29,000,000 tons. And this record breaking pig iron year will in all likelihood be accompanied by a production of steel ingots and castings of more than 29,500,000 tons. The latest report of unfilled tonnage on the books of the largest producer showed a total only exceeded by those at the close of the years 1905 and 1906. Prices for all kinds of steel and iron have advanced to a profitable basis without perceptibly lessening the demand, premiums frequently being paid for prompt deliveries. High prices and heavy demand in both the British and the German markets favorably affect the exports of American steel products, and rails recently sold at higher prices for export than for domestic deliveries — for the second time in the history of the trade.

For example, the heavy purchases of railroad equipment and electrical machinery have brought an increasing activity to the iron and steel trade in Pittsburg. There are large steel manufacturing companies that report enough future business, with favorable conditions, to insure five years of exceptional activity. Such an optimism in the city's primary industry, steel, has a favorable effect on all wholesale and retail business and helps the glass manufactories toward confidence and prosperity.

Copper is experiencing one of its periodical booms with production at record

figures and prices nearly 60 per cent. higher than in the summer of 1911 when many of the mines shut down.

In New England, the manufacture of wool and cotton is the dominant industry as the steel business is around Pittsburg. When the woolen mills are behind in their orders as they are now, and the cotton mills running at nearly full capacity, there is a good foundation for prosperity in New England. The cotton mills are not yet operating to full capacity, owing in part to uncertainty regarding the raw cotton situation, and at some places because of a shortage of labor. The woolen and worsted mills, however, find it difficult to meet the demands for goods that are made on them; while the silk trade is improving and the yarn markets are strong.

The chief drawback in that part of the country has been in the shoe and leather business. The high price of hides and skins forced an advance in the price of the manufactured product that buyers were for a time slow to meet, and this curtailed the demand, but recent reports show that demands are now increasing. Other manufacturing businesses in every part of the country report a resumption of full time operations, and many factories are running to the limit of their capacity and others are hampered by shortage in supplies of skilled labor.

The broadening demand for commodities and the increasing mercantile activity indicated by the manufacturing conditions just described are fully reflected in the bank clearings for the year thus far. For the eight months ending with August, 106 out of 128 cities reported larger clearings than they reported in the corresponding period of 1911. In New York the gain for the period was 6.5 per cent., the average of the other cities was 8.5 per cent., and the average for the country as a whole 7.4 per cent. This increase is all the more significant since it was made in spite of greatly reduced speculative activity. Transactions on the New York Stock Exchange for this period were smaller than for any corresponding period since 1898.

The Prosperity Records of 1912

Corn Oats Barley Flax Hay	United States Government Estimates to Surpass Nearly All Previous Crops
Pig Iron	"Iron Age" Estimates Production to Exceed 29,000,000 Tons, the Previous High Record
Exports Imports	Largest in Our History Estimated upon the First 8 Months of 1912
Labor	Demand for the Largest Army of Unskilled Workers Ever Enlisted in One Country at One Time

In the United States

Equally valuable as a measure of the actual expansion that has already taken place in industrial and commercial activity is the record of railroad earnings compiled by the *Financial Chronicle* in conjunction with latest returns from the Interstate Commerce Commission. The latest approximately complete returns available are those for the month of July, covering 416 roads with an aggregate mileage of 230,712 miles. They are shown in this table:

THE INCREASE IN RAILROAD EARNINGS (GROSS) IN JULY, 1912, OVER JULY, 1911

LOCATION	NO. OF ROADS	PER CENT. OF INCREASE
New England	14	10.20
Eastern and Middle States	79	10.66
Middle Western	63	11.51
Southern	75	9.
Northwestern	62	9.30
Southwestern	89	12.63
Pacific Coast	34	7.61
Total	416	10.34

Preliminary returns for August covering 89,691 miles of roads show an increase of 8.79 per cent., which is larger than for any month except July and February, indicating that the improvement is progressive — a fact borne out by the steadily increasing ratio of gains throughout the year.

A most impressive exhibit confirmative of this evidence of increasing business activity and forecasting still larger gains in the near future is the latest report of the American Railway Association regarding car surpluses and shortages. This statement shows a total surplus of idle cars, on September 12th, of 27,380 for all roads having a surplus, and a total shortage of cars on all other roads of 36,000 cars, making a net shortage of 8,620 cars. This is the first time there has been a net shortage since December 13, 1907. As one of the heaviest crop movements in the history of the country is just beginning and the movement of iron, coal, and manufactured goods is rapidly expanding, it seems likely that net shortages will increase steadily for some time in spite of the efforts of Boards of Trade and railway officials to keep the two and a quarter million freight cars in the country busy every possible moment.

The record of commercial mortality for the year, as far as reported, furnishes another basis for the study of the situation; but the current failures, of course, reflect past rather than present conditions. It is also important to take into consideration the rapid increase in the number of firms engaged in business, as a proportionate increase in the number of defaults may fairly be considered as normal. The accompanying table, based upon the statistics compiled by R. G. Dun & Co., shows the number of failures for the years 1906 to 1911 inclusive, and for the first two quarters of the present year, the number of firms in business and the percentage of failures to these totals; also the total liabilities and the ratio of them to bank clearings for the corresponding period.

Although the number of defaults for the

THE RECORD OF FAILURES, 1906-1912

YEAR	NO. OF FAILURES	NO. OF FIRMS IN BUSINESS	PER CENT. OF FAILURES	TOTAL LIABILITIES	RATIO PER $1,000 BANK EXCHANGES
1912 2d Quarter	3,489	1,565,283	.22	$ 45,999,900	1.06
1912 1st Quarter	4,828	1,545,089	.31	63,012,323	1.48
1911	13,441	1,525,024	.88	191,061,665	1.21
1910	12,652	1,515,143	.83	201,757,097	1.23
1909	12,924	1,486,389	.87	154,603,465	.92
1908	15,690	1,447,554	1.08	222,315,684	1.68
1907	11,725	1,418,075	.82	197,385,225	1.36
1906	10,682	1,392,949	.77	119,201,515	.78

present year thus far has been larger than the number last year, every month since the beginning of the year has shown a smaller total than that for the preceding month with the exception of July, when semi-annual settlements normally occasion an increased number of mortalities, as shown in the table:

FAILURES, BY MONTHS, DURING 1912

Month	Failures	Month	Failures
January	1,897	May	1,204
February	1,539	June	1,006
March	1,392	July	1,230
April	1,279	August	1,102

This clearly indicates that the long period of strain following the panic of 1907 is apparently drawing to a close, and with the active business conditions foreshadowed in the foregoing analysis of conditions, it is probable that the failure record during 1913 will show a progressive downward tendency.

The year 1912 will undoubtedly establish new records for both imports and exports. Our imports exceeded the corresponding totals of a year ago during every one of the eight months now officially reported, and the exports did the same for every month except June. The most noteworthy feature of the export returns is the large and continuous growth in exports of manufactures, showing that American manufacturers of almost all kinds of goods have been making conquests in foreign markets. On the other hand our imports have increased chiefly in food products and in raw materials for manufacturers. The balance of trade at the close of August was $228,288,675 in favor of this country.

This favorable balance of trade has a bearing on the money situation, in view of the resumption of gold imports and of the certainty that demands upon New York and interior banks for moving the crops will be very great. The heavy exports of agricultural products that will shortly begin will tend to swell the favorable trade balance, while the sale of American securities abroad will also help to further gold importations. Whether the banks will be able to meet the demands upon them without any aid from the Treasury Department is uncertain in view of the expansion of industrial and mercantile activity in all parts of the country coincident with the crop movement. In the complete absence of any speculative excesses, however, it is felt that that situation is essentially a healthy one. The bankers will undoubtedly enjoy a very active and prosperous period and there is little doubt of their ability and willingness to meet every legitimate requirement.

THE CALL FOR LABOR

Difficult and intricate as are the problems connected with adjusting the nation's monetary resources to the strain of a sudden and widespread demand such as the present conditions clearly foreshadow, a far more serious task will be the meeting of the labor demand thus created. Mills resuming full time are calling for skilled operatives of many varieties and (according to reports now coming in from widely scattered industrial districts) are experiencing difficulty in finding them. The crop situation and the numerous great public and corporate improvements now being started call for the largest army of unskilled laborers ever enlisted in one country at one time. For many weeks past, employment agents have been scouring the parks and lodging houses of New York, and even the bread line, in search of men willing to do manual labor. The representative of one of these concerns recently declared that if he could secure 500,000 such men he had work for them all. Help, however, is coming as fast as the ocean greyhounds can bring it, as the rapidly swelling steerage lists of incoming liners show. By ten thousand mysterious channels the message has gone to every corner of Europe, "There is work in America — Come," and by the end of next spring the ranks of the unskilled labor army will not be empty.

In summing up the existing industrial and commercial situation in the foregoing paragraphs, stress has intentionally been laid on the favorable element in each of the various phases of the subject considered, because that favorable element in each case indicates the trend or tendency

that is our only guide as to the future. The exceptionally favorable crop situation; the fast expanding activity in iron and steel and copper, and the more gradual broadening of the demand for textiles, footwear, and leather goods; the noteworthy increase in bank clearings and railroad earnings; and the evidence that, for the first time since 1907, every freight car in the country is needed; the apparent turning in the tide of commercial defaults; the phenomenal import and export records; the healthy money situation; and the widespread demand for labor — all these things have contributed to the feeling of confidence that now pervades the mercantile community and are evidences of its growth and permanence. It should not be concluded, however, that because confidence has at last returned we are on the eve of a "boom." On the contrary the period through which we are passing is one of recovery and, while consumption has in a few isolated instances apparently caught up with production, the nation still has a considerable distance to travel before the recovery will be complete. Population is larger than in 1906–1907, productive capacity is greater, and even were production to break all the records of those record years, the output might still fall short of the actual requirements of to-day. We are at the beginning of what promises to be only a period of good times, and it is the most encouraging feature of the situation that the expansion which indicates this upward trend is apparent in every one of the records by which the current volume of business is ordinarily measured, and that it is in almost equal evidence in every portion of the country.

"ONE REMEDY FOR EDUCATION"

THE USE OF MAGAZINES OF CURRENT EVENTS AS TEXT BOOKS IN HIGH SCHOOLS

BY

WILLIAM McANDREW

IF THERE is anyone who believes that our public education is thoroughly sane and sound he is not a teacher or very often on the spot where the work goes on. From the schoolmasters the former chorus of self-praise is heard no more. The old need of waving the stars and stripes to defend every feature of schooling has passed. No one sees more clearly than we who are at the business every day, that out-worn absurdities persist. There are several things the matter with education as we know it in the public schools. To conceal them or to refuse to recognize them; to believe that loyalty or duty or expediency requires a schoolmaster to defend the schools for all they do, would be not only contrary to the schoolman's desires but it would be fatal to his success. One notable feature of the first twelve years of this century is the widely published expression of dissatisfaction with the schools. To no one are these criticisms more welcome than to the teacher of to-day. Making allowance for the proportion of us which is averse to any change whatsoever, the average schoolman is decidedly dissatisfied with the progress of his craft. He knew before the editors began to exploit them the weaknesses of the schools, but he needs a dissatisfied clientèle before school boards and systems will move. Schoolmasters are not dead from choice but from circumstance. Our system puts schools in charge of a board of education only secondarily interested in them. Its notions of schooling are naturally those that its members formed when they were boys. Its meetings are too far apart. When it reassembles, its instinctive wish and expectation is to find things as they were at the last session. It is naturally suspicious of change. It had a trust passed over to

it by its predecessor; it feels in duty bound to conserve it. Teachers and superintendents under its direction are safer if they do as others do than if they attempt new ventures. Economy and retrenchment are conventional virtues of school boards. These qualities are sisters of conservatism. Novelty, change, upset, difference, are always unwelcome elements in school organizations. It is easier to nurse along an old machine than to put in new parts.

The meaning of the head lines of this article will be misinterpreted by many. The title will seem to be another revolutionary exaggeration condemning all our cherished beliefs in public education and substituting some freakish proposition in their place. Not at all. The oldest school trustees declare our education is not free of defects. Let me recount one well-known ailment of it and describe the application of one remedy.

THE BLIGHT OF CONVENTIONAL TEACHING

The disease of formal education most common is a sort of intellectual sclerosis, a hardening of the tissues. Somewhere, some time, there must have been a reason for the things schools now do as matters of routine. The need of ability to read and write and cipher is so essential that everyone knows we always shall have schools to train so much. But children of ordinary intelligence learn, in from a half to a third of the time devoted to elementary schooling, all the reading, writing, and ciphering they ever know. There is all the remaining time of the primary and grammar school; there is the entire time of the high school that must be filled with something. There are those who declare seriously that only the three fundamentals should be the concern of the public school. These arguers have made little headway. There is an instinctive confidence in all of us that training can, if earnest and intelligent enough, develop in a soul all there is in it. The majority of us cannot get away from the fact that, no matter how expert he is in reading, writing, and figuring, the boy of ten years of age is not developed. The probabilities are against his development if left to himself. He does not know what he needs; if he did know he would lack opportunities of getting it.

All the instincts of humanity, all the growth of civilization, demand that intelligent concern be devoted to the success of the young and inexperienced. The force that holds society together makes it also desirous of providing for children such training as shall perfect them, as nearly as may be, in accordance with their possibilities and for living life to the full. All the time beyond that given to a mastery of the three elemental tools of knowledge is theoretically devoted by schools to the varied needs of the human unit who is the centre of the educational purpose. This is the weak spot. There is nothing at all the matter with the theory. No one has any quarrel with it. If the system permitted teachers to live up to this ideal, remarkable increase in efficiency would result. If we were compelled to live up to it, education would at once rise from its present quackery to a supreme profession. But because of too narrow a view of the meaning of education or from a lazy inclination to make school-management easier, the large purpose of assisting the potentialities of children to grow for the fullest living is not honestly aimed at in schools.

They concentrate upon side-issues always. Some persons or congress of persons a long time ago decided what means might be employed for the desired perfection of human powers. Schools are now maintained not for perfecting the powers but for using the conventional means. The machinery of education is not subsidiary to the work to be done. Attention is concentrated not upon the result desired but upon what was conceived as the medium by which the result could be come at. This is no longer a medium. It is the ultimate, the thing looked for most, and considered the final test of education. If a young person has gone through the selected exercises he is called educated. If a teacher has brought a class over the course of study she is a successful teacher. A curriculum has become the main consideration of schooling. Its literal meaning is "a little circle." Teaching has become the formal proces-

sion of instructor and followers around the well trodden rings. The lessons this year are reproductions of those of last season. The paths in Buffalo schools are the same as those in Syracuse. There is a dreary lack of variety. School is a dull place. It is open a hundred and ninety days a year for five hours a day and must have all the other hours and days for relief. That all these schools have adopted the same content of studies is used as a proof that these must be the best and only exercises for the making of men. If you go through these it is expected that you will gain a mental fibre that equips you for action and that you will store up a body of information that will be of value. But who chose these studies? Were the selectors inspired by wisdom direct from God himself that these time-worn themes, while life goes through successive changes, remain specifics for all time? The schools cling to them with a fealty born of indolence and nourished into a devotion. This is the hardening of the tissues; this is the disease, the infirmity of education. It has placed the schools in an absurd position in which they now have a dearth of defenders, especially among teachers. In place of defense there is only explanation and apology. More men are ashamed of teaching than of practising medicine, law, theology, or engineering. In place of correction we have had a general inertia perpetuated by a style of organization that puts the control in the hands of busy citizens, who cannot study education but who find it safer to conserve such school usages as we have than to run the risk of differing from other towns.

WHAT THE TEACHERS THINK OF IT

But at the talk-festivals at which we teachers gather in large numbers we suffer no lack of discourse on what education is and what it is not. All the leaders repeat that education is no transmission of knowledge from books or teachers to children. That, they say, is but a minor part of it. But when a visitor sits in a class-room, where the works really operate, when he sits in school boards where the authority rests, he cannot get away from the certainty that education in practice really is what its apostles say it is not: The delivery of a commodity, the completion of a measured length, the covering of a definite amount. It is fixed; it is marked off into grades; its form is paramount. Those preparing themselves to teach study it more than they study children. If they specialize they concentrate upon a part of the course instead of becoming expert in the cultivation of some human power. The children are classified not according to their general intelligence or ability but with regard to this artificial fetich, this graded mass of tradition viewed as "an education" and professionally called the curriculum. It is the centre on which the eyes of the school people are so intent that they can scarcely see the children; it is the focus on which teaching has been so concentrated that it has not seen the world moving away from it until now, through the chief mediums of public expression, disappointment is voiced in tones of resentment and protest, because the results promised for free and universal education are not in evidence.

To continue this costly and time-consuming institution with its present lack of intelligent purpose is to waste the people's money and to exhaust their patience. It will result in a withdrawal of public support from all except the simplest elementary schools. The passion for liberal education, which national prosperity and roseate prophesies for extended schooling have developed to a wonderful degree in a single generation, will as quickly disappear if the increasing disappointment chronicled in print is not removed. Until the rigidity of the school course is broken, until the attention of the school men is centred upon children and children's needs instead of upon arbitrary collections of studies and methods of presentation, the intelligent citizens of this country, who care more for children than they do for teachers and courses, are not likely to decrease their expressions of contempt and complaint.

MAGAZINE STUDY AS A REMEDY

Among the teachers whom I meet are a number who are unwilling to lose them-

selves in this fundamental error of the fixed and uniform course of study which many of our eastern systems require. These people have formed an informal group for discussion and counsel, chiefly concerning the problem of saving the children from education and ourselves from mental atrophy. From these hopeful heretics a wealth of promising suggestions has come; by them a number of valuable experiments have been tried. The starting point is the particular young persons of the promising ages from twelve to eighteen who are our daily business. The time-honored rule which we are required to observe prescribes that a list of exercises in algebra, geometry, Latin, English, science, and conventional history be completed by the children in a designated manner.

That this group of young persons shall do uniform work of this sort; that successive groups, year after year, shall do the same, is the almost universal practice of schools. This is the disease of education for which the company of teachers I mentioned are trying remedies. They are not allowed to break the system and to substitute for its fixtures different pursuits in accordance with the capacities and expectations of different assortments of children. These teachers may try their divergencies only after regular hours and with volunteers who are attracted by the natural interest of the proposition or by the manifest advantage of it. The benefit suggested in the title of this article is only one of the correctives of our rigid education which are being tried. It interested the editor of this magazine at whose suggestion this account is written. The experiment is not set out as a complete remedy or antidote or substitute for the thing schools call education. It is not even new. There are schools in country towns in Scotland which make magazine reading a regular exercise. It is a feature in the training of children which those teachers who have employed it think so superior to the conventional study of English and of history that these persons advocate taking time from either or both of these pursuits for the reading and discussion of magazine articles under the direction of a teacher.

One of the initial observations which led to the formation of the Magazine Class was a report prepared by one of the teachers opposing the appalling ignorance of the more completely educated girls, those in the senior class. Tests in various communities indicate that the longer one remains at school the less usable things he knows. These seniors could tell nothing of Luther Burbank, the disturbances in China and Mexico, Amundsen, Philander Knox, the malarial mosquito, or Robert La Follette. Why should they? The men and events that twenty centuries ago bore the important relations to the world that these acts and persons bear to us monopolize the thinking time of these girls, who are storing their minds with lumber against the day of examination. One's appetite and capacity are limited. Make the life and politics of Rome paramount; devote your attention to thoughts of Pope and Addison; concentrate upon abstract mathematical science during the most impressionable periods of life; proceed as though you were preparing to live in the past; the result must be as these investigators report, that the graduates from our perfected education are unfitted for present life or for any hereafter which we can imagine. Inasmuch as our systems, curriculums, syllabuses, and examinations are conducted as if to supply their beneficiaries with information, why not provide information which the educated can use?

THE TYRANNY OF THE SYLLABUS

One of our women, with note-book in hand, followed a class of fourteen-year old girls through a sample day. The first hour was devoted to three pages of a text-book in algebra. Even the warmest teachers of this subject frankly admit that it will never be put to use by the girls who study it. The next hour was occupied in attending to the digestive system of clams. The limits and the nature of the lesson were manifestly controlled by the teacher's purpose to "cover" the syllabus. After an hour in a study hall, during which the presiding teacher insured an atmosphere of quiet, half an hour was devoted to luncheon in surroundings devoid of any sign of refining purpose. The girls then devoted an hour to Sir Walter Scott and

"Ivanhoe." A bright teacher, by means of pictures and spirited conversation, endeavored to interest the young women of 1912 in the attempts of a writer of two generations ago to depict the life of twenty-three generations before his time. To conclude the day some elements of the Latin language, classified and formalized by English professors of cloistered life knowing nothing of the inevitable heritage of these young persons, were repeated and applied in a way that no person who ever acquired a language for use would dream of employing. The girls then went home to do by themselves things similar to what they had done in companies and would do upon following days. For use in the ordinary programme of the life of the American citizen there was next to nothing in this sample day. You may find it duplicated in every city of the country.

The topics of the school room are isolated. One can not find an opportunity to use them in society. No one will engage with us in a chat upon the clam's digestion, the ablative absolute, or Sir Walter's style. It can be argued with some degree of truth that the things taught in school are what our best society ought to talk about, but so far are our school managers from controlling the thoughts and conversation of the world that we usually find ourselves awkwardly silent in company because we belong to an epoch that has passed. Either for the reason that our brain substance is exhausted by dragging uninterested children through the remote subjects of our curriculum or because we think we are too tired to inform ourselves upon the current ideas of our time, we pedagogues are ignoramuses regarding everything outside the course of study.

To repair this lack in themselves and in the children, the group of teachers of whom I am speaking resolved to take up regularly some consideration of the chief concerns of the American people of to-day. The newspaper requires more time than that perpetual bugaboo, "regular school work," will permit. The newspaper not uncommonly violates the conventional rules of grammar and rhetoric sufficiently to revolt even the most liberal minded teacher. It is too hurried for accuracy; it makes too much of distressing things. The experimenters wanted well-considered ideas, carefully selected, thoroughly prepared, expressed in clear, imitable, and carefully edited English, illuminated by objective illustrations of good workmanship. Various available periodicals were considered. By vote the World's Work was selected and put into use as a hoped-for corrective of some of the defects of education on which I have already dwelt at some length.

EDUCATED IGNORAMUSES

As already remarked, the teacher who began this was influenced most by the ignorance evidenced by young girls who were devoting most of their energies to devouring matter which they will rarely if ever use. But teachers who advocate the regular employment of the magazine as an essential for the education of the rising generation insist that all the theories of training which advanced educators propound can be better observed by this study than by the best fixed course now in vogue. Mental discipline is the great claim of defenders of the current usage. They hold that algebra, Latin grammar, conventional analysis of English classics, are the best makers of brain substance known. The rust is thick upon this weapon of defense. No one ever proved that the discipline of algebra produces any mental power other than that used in algebra, a subject unrelated to life. It is doubtful whether one who successfully passes a course in algebra is as capable of thinking on every-day subjects as a lad who, without algebra, has been selling papers on the street or computing profits on the farm. It is my own observation that the concentration of children's minds upon symbolic minutiæ unrelated to life damages rather than improves their fitness for effective living. Mathematics teachers as I have known them do not excel as leaders of sound judgment in practical affairs. The same is true of the style of mind produced by intensive drill upon likeness and difference of grammatical forms. Life is hardly so microscopic or so inevitably certain as the favorite school exercises mostly are. Were it not for the

united weight of tradition and uniformity, one would doubt whether, in preparing a child for life in which almost every question has several answers, it were proper to engage him so much on things that are absolutely and inevitably correct in one particular way. Because scholastic authority has fixed education this is not proof conclusive that education is what it should be. The best intellects of a previous age were sure of infant damnation, of the necessity of closed sleeping rooms, and of the divine right of kings.

What particularly enhances this magazine study is its encouragement of difference of opinion. Even so human a subject as history as taught in school gives little opportunity for variety of view. Its problems, if dwelt upon, are presented as a case settled. The teacher has gone over the events so often that conclusions are fixed in his mind. He does not prevent his ideas from obtaining with the children. Where there is no doubt there is no exercise of judgment. The dictum of superintendents, that a teacher can not know a subject too well, is true enough where one's purpose is to transmit knowledge; but the most common criticism of our school practice is that it does nothing but transmit facts. It does not develop thinking. Harmsworth and Gorst insist that our training is producing a race of white Chinese in America, all uniform, who accept judgments without examination and are incapable of independent reasoning. Higher schools have assumed to train leaders for us. The methods are too well adapted to the education of followers. The sort of leaders we have enough of is the kind which counts upon the unthinking compliance of multitudes, upon crowds who swallow a spoken or printed assertion without question.

PRACTICAL RESULTS OF THE NEW METHOD

Unsettled problems constitute little of a public school-teacher's menage. The course of study is composed of conclusions. It has been decided that the teachers shall use it. It has been prescribed how and when the subjects shall be taught. The traditions surrounding a teacher, the present expectations of him, are that he shall not admit ignorance of anything. He grows impatient of contradiction, accustomed to impress his view upon the entire company over which he presides. His word is law. The atmosphere of a school, the intended training place of future citizens in a republic, the supposed seminary of independent, self-reliant souls who must do their own thinking, takes on the spirit of a military organization in which efficiency depends upon unquestioning obedience. The use of a magazine of current ideas seems a direct remedy for this defect. Timely problems are unsettled ones; otherwise they would not be current. The exercise of judgment is more easily possible because the ideas are almost as new to the teacher as to the others. Here is a situation where happily the teacher does not know it all. There is brought into school the novel and desirable condition of equality of ignorance. In a magazine class I saw the unusual and delightful spectacle of a teacher listening to recitals of things unknown to her. The topic was the article, "A New Element in Strikes," in the WORLD'S WORK for May, 1912. The discussion had centred around the laws for the restriction of the hours of labor of women and children. Two girls from the East Side, members of whose home circles are in the waist-makers' union, set forth with vividness of detail and earnestness of manner the condition of the trade-working woman more effectively than the best-read teacher could dream of doing. The other girls listened and commented with an intentness that only one teacher in a thousand, treating of text-book history, can secure.

The incurable trouble with school-book history is that it is dead. The American Revolution is settled; the enmity against England was buried almost a hundred years ago; slavery and the Civil War are ast issues. The perplexities that confront our future between now and 1930 are almost utterly ignored in the education of young men and women who must wrestle with these problems. Because these topics have in them the possibilities of controversy they are banished from schools and in their place are put things like the danger of Cataline's

conspiracy, the variations of verbs, and the campaigns of the army of the Potomac that do not now matter. Shades of Socrates! The very things needed by the growing mind after it has been taught to read and write is practice with ideas that require controversy, difference of view, balance of reasons, suspension of judgment. Instead of being justification for excluding subjects from the training of citizens, uncertainty, doubt, and divergence of opinion are the strongest points in favor of debatable themes. Let our young men and women learn the art of courteous disagreement and acquire the open mind amenable to reason.

HOW THE PUPILS LIKE IT

This is one of the advantages derived from the coöperative study of a magazine of current thought. In the World's Work articles upon "The Recall of Judges" and "Why I am for Roosevelt" both in the March, 1912, number, occur suggestions which brought to opposing sides every one of the company. At the close of the lessons the teacher asked whether, during the discussions, either set of advocates was conscious of any change of opinion. There were some who confessed to being more or less sure of some things than they had been. It is well worth while for lessons to be given in which even the suggestion of a change of view is made. It was fine to hear the teacher say, at the close of the hour, that to her mind many of the questions were now open ones and that everybody could say for herself whether she would be on one or the other or on neither side. This is a valuable conclusion for a school exercise. The educator's foible is completeness. He must settle everything for himself and for you, too. After every teachers' meeting the presiding authority sums up and tells you what ideas meet with official approbation.

One delightful thing about the magazine study is that the classroom has an atmosphere more natural than one is likely to find when the ideas of the regular course of study are the only staples. Then the talk of students is artificial because they are aware that the teacher knows more about the subject than the children do. A pupil usually offers to a listening instructor only so much as is calculated to satisfy the question. The teacher knows what the answer ought to be and waits for the expression of the conventional idea that has always belonged. When the right answer comes the conclusive and welcome "correct" ends that step, or else the teacher says "yes" and repeats the reply, recasting it in the form which successive years of familiarity with that question and answer has given a satisfying sound. There is nothing like this common in life. We do not often appear in law suits to have our opponent's attorney ask us questions to which he knows the answers beforehand. In life most queries are put to us by some one who does not know and wants to find out. School foolishly reverses this process. The teacher knows the most. The children ought to be asking questions. It is their natural habit but you almost never find this going on in school. In the World's Work class the teachers found that they did not have time to read each number of the magazine through before the children were ready to go on with it. There resulted the experience, unique for a school room, of having questions asked for their natural purpose not of finding out that a person could not answer, but to gain useful knowledge. The magazine class approached more nearly the nature of a high-grade dinner party conversation than anything I have seen in school. For its topics were fresh; they were interesting, they were worth while. The participants were more upon the same plane of knowledge than is possible with cut and dried school subjects for which the teacher has prepared by many years of repetition. It seems to me that to give young people exercise in natural conversation is a valuable social service. I am appalled at the barrenness of the conversation of school people. We are wretched listeners and poorer talkers. We are rarely engaging or entertaining. One might reasonably expect a scholarly professor to converse surpassingly well. He usually disappoints. The immature youth who spend so much time with us fail to gain habits of conversation which

are essential to the growth of a social being like man. I notice especially at school parties or when I overtake one of our youngsters on the street how pitiably clumsy they are in their talk. Not only has our education failed to bring out their social graces but it has suppressed what they have. The boys of meagre schooling, whom one meets on the city streets or in the Maine woods, show, after you have coaxed away their shyness, a power of sustained conversation that makes their society a delight. It is a sorry thing that labored and expensive teaching should render one less agreeable to his fellows and less able to use that power which most distinguishes man from the beasts. It was the observation of the teachers who tried the magazine lessons that the girls developed the power to think connectedly and to listen more appreciatively.

The nature of the subjects presented secured another result which reformers urge upon us: the closer relation of the school to the home. One girl informed us that she had paralyzed her family by joining in a table conversation upon the referendum. "They didn't think I knew anything about the world of to-day," she said, "but I kept my part up as well as papa." This is much. If school were really fitting for life, school practices would be employed in daily experience all the time. Beyond the reading, writing, and ciphering, there is too little in school that is based either upon the immediate needs of life or upon any remote necessities that have been weighed and appraised. That is why school and home have so little in common.

Mary Flexner's story of the "Misfit Child," told in the March number, 1912, illustrates the value of a subject when it treats in a constructive way the problems which concern home and society. Possibly the interest was enhanced by the fact that our perfected system of education, centred on its courses and methods instead of on its children, had given to the young readers more than one experience of unsuitability. One girl insisted that Miss Flexner should have called her article "Misfit Schools." because, she said, we do not call the dressmaker's customers misfits but her own imperfect work gets the bad name.

The accounts of socialism were so much in demand in making assignments that these articles had to be given out by lot. The same was true of the autobiography of Joseph Fels. The partiality of high-school girls for political subjects is surprising. No one really knows what the mental appetite of girls is unless he tests it by some more intelligent method than was ever used in selecting the intellectual food furnished by the schools. "How to Get Rid of Flies" was a star study. "China as a Republic" lasted six lessons without a cessation of interest. Woodrow Wilson's biography proved a fascinating attraction. Selma Lagerlöf and her essay on "Woman the Savior of the State" was a prime favorite. But the short editorials, grouped under the heading, "The March of Events" proved to be the standard enjoyments of the course.

It is inevitable that I shall give largely the views of teachers and of adults. But I do not regard anything that freshens and brightens our own pedagogical minds a waste of time. One woman who is running a magazine class says she has taken a new lease of youth. "I have taught the same English so many times," she says, "that to me it is a dead language. I know that I can't keep up much longer the deception that DeQuincey, Pope, and Addison are the best literary diet for these girls. I have trod the rut so deeply into the ground that there is not a surprise possible for me in the whole road. I know that the dear youngsters simulate an interest, but it is from politeness and from the hope that sometime an advantage of analyzing these moth-eaten worthies will appear. Poor children, they'll never read another line of any of these authors or ever want to. If they ever write like Addison no one but an English teacher will read it. But this WORLD'S WORK discussion is as fresh and stimulating as a Spring walk in the country. It's so enjoyable I have an instinctive dread that it must be a wrong thing to do in school. I have read the magazine regularly before, but it is the talk about it and the exchange of opinions that count."

BOOK COLLECTING

THE SPORT OF MONEY KINGS

MR. H. E. HUNTINGTON, WHO PAID $50,000 FOR THE GUTENBERG BIBLE; MR. J. P. MORGAN'S 9-MILLION DOLLAR GATHERINGS; AND OTHERS — BUYING A COPY OF SHAKESPEARE BY PROXY FOR $18,000 — RARE BOOKS AS A SPECULATION AND AS AN INVESTMENT — THE GENTLE BIBLIOMANIAC BECOME A BUSINESS MAN

BY

JOSEPH JACKSON

"BUT," I protested, when a bookseller (whose principal customers were very rich men) was explaining the beauties of a Solander case, "if I should leave my Pickwick in original parts unbound, they would wear to rags."

"A collector does not read his Pickwick in parts," he replied, with a pitying condescension in his voice.

"Then why does he buy it?" I persisted.

"To show it to his friends.'

And I learned that when a collector exhibits his prizes to his friends, they are just as effectively displayed in a glass case, for it is a rule that the treasure owner will not permit his friends to handle the volumes.

There are to-day collectors who avowedly regard their collections of literary property as investments. On the other hand, there still remain at least a few great collectors who do not look upon their collections in that light.

As the rapid increase of the wealthy class in this country has been instrumental in the numerical growth of collectors of literary property, there has been a tremendous increase in values in all the desirable kinds of rare books, due to the limited supply and the urgent competition in the demand. As a consequence book collecting, excepting for those of rare knowledge, persistency, and — let it be said — luck, is a game that only the wealthy can play.

A peculiar feature of the situation is that, as a rule, the wealthy leave agents and booksellers to play the game for them. For example, when, some five years ago, the wonderful collection of William C. Van Antwerp, of New York, was announced for sale in Sotheby's, London, the late Harry C. Widener, of Elkins Park, Pa. wished to possess the copy of the First Folio Shakespeare, which was known to be in the sale. It is nearly 3,000 miles from Elkins Park to London, and Mr. Widener did not want to go himself. And, though he could draft one of the London dealers into his service, he decided to send a Philadelphia dealer as his agent. He had the utmost confidence in his agent, and knew his commission would be attended to as faithfully, and probably more skilfully, than he could have done it himself.

His agent went to London, attended the sale, and carried off the prize, at $18,000. It was a costly way to buy a book, but it would be far more costly to leave the commission in inexperienced hands, and find the folio was deficient in those infinitesimal "points" which make or mar it. There was nothing of this character in the folio he bought, however, for it is acknowledged as the tallest and finest copy of the great book in existence, and, in addition to the other expenses, the collector had paid the record price.

There are many other first editions that have to be distinguished by expert knowledge. De Foe's "Robinson Crusoe" is one. There are at least two issues of the first edition, and the difference between them means a good many dollars. There must be the advertising pages at the back of the book. In many a fine morocco-

bound copy in a collector's library these very pages are missing. Of Goldsmith's "She Stoops to Conquer," the first edition can be distinguished from the second only by the number of the typographical erors.

Many collectors were added to the genus in this country by the advertisement which the sport of collecting received from the Robert Hoe sale in New York. Thus Mr. Henry E. Huntington became widely known as a collector for the first time. Though he had his agent at the sessions in the auction room buying for him some of the Hoe treasures, he also, for a great part of the time, sat beside his specialist. It is generally understood that Mr. Huntington was so magnificent a collector that this agent must have received considerably more than $30,000 for his two weeks' attendance at the sales — perhaps 10 per cent. of the value of his purchases. He, too, must have become a magnificent person, who can earn the year's salary of a railroad president in two weeks; he is perhaps the best paid specialist now in America. But sales of the magnitude of the Hoe collection occur not more frequently than once in a generation, and collectors like Mr. Huntington, who begin where the average book collector leaves off, are found even less frequently.

Many American book collectors gather their treasures far more rapidly than it is physically possible for them to read them. Even the average book collector — the man who collects books in great numbers and is willing to purchase any rarity that is offered him, if it contains features that set it apart like a museum specimen — is not in the same class the book collector formerly was found in.

In pure prodigality of expenditure, in the universality of desire, the American merchant or Big Business Prince far surpasses any De Medici, any Ashburnham, any Perkins or Grolier who ever adorned a past age. A century and a half ago, the largest private library in America, that gathered by James Logan (the Secretary of William Penn and deputy Governor of Pennsylvania) consisted of a few thousand volumes comprising the classics in the original. To-day, there are thousands of book collectors in this country who have far larger and immensely more valuable collections, and they have made them within a decade. Logan acquired his treasures (which, it may be mentioned, he read) in a lifetime.

We are gathering the literary treasures of Europe so rapidly and with so much persistence that Europe already is alarmed at the prospect. London booksellers now even compete at our auctions for rarities, which can, in many instances, no longer be procured in Europe, and which later they sell to American collectors through their catalogues at princely advances. They know that the new American collector has not yet reached the point where he believes that the American bookseller really is an authority on these European books.

Only a short time ago, for example, a bundle of manuscript poems and memoranda by Walt Whitman was sold in a sale in this country for $12, and later was snapped up in London for $40. A little later more than the price paid for the lot — and there were a good many pieces in it — was asked in a catalogue for a single item. And a copy of "Great Expectations," the first edition in the now rare three volumes, was bought in London for about $200 by an American dealer. He sold it at a profit of $100, and in less time than a year the London dealer was willing to give $400 for it, presumably in order to sell it to another Dickens collector at a still higher advance.

More and more the American book collector is looking upon his collections as an asset or as an investment. Seldom does he have any idea of handing them down to one of his children, as used to be the custom. He calculates just what it costs him to carry his treasures. This, for a million dollar library, would cost its owner about a thousand dollars a week in loss of interest alone, to say nothing of the cost of insurance or of the inevitable depreciation of some of the books.

This depreciation cannot always be foreseen There are fashions in book collecting, and no one can foretell whether one line of first editions will next year decrease in value in the auction room with-

out any apparent reason, or whether another line will increase in value.

It seems to be a sure guaranty of a book's stability in price for it to get a place in the acknowledged list of classics. "Robinson Crusoe" is an instance of this classic list sustaining a rather well supplied book. In 1825 the two volumes — for it then was not customary to desire the "Serious Reflections of Robinson Crusoe," which now is regarded as the third volume, and by students as the most valuable one — were quoted at about $8. At the Hoe sale, the first edition of each volume and the right issues with the plates, three volumes, dated 1719 and 1720, fetched the record figure, $1,750. They have brought from $1,100 to $1,500 in book shops within the last ten years.

First editions of the New England poets and other literati of that school have dwindled alarmingly from what they were ten years ago. Here, too, are a few exceptions, for a fresh, uncut copy of the first edition of Whittier's poem, "Moll Pitcher," probably would bring to-day even more than it fetched then. Even certain volumes of Americana are less sought than formerly. Of rarities, the reason is found in the discovery of more copies. When a unique copy of a book is turned up and fetches an immense price at auction, most of the garrets and closets in the country are turned over in a search of more treasure. Thus a few more copies will remove the chief value of the first one.

There is one notable exception to this rule — the First Folio edition of Shakespeare's plays. This is one of the prizes which every great collector of English poetry desires—though of no other volume printed in the same year, probably, are there so many copies still in existence. If in perfect condition, a copy of it will fetch $15,000 or $18,000 at auction. Fifteen years ago it could be bought for $5,000 or $6,000. These prices are for a "tall" copy, without any pages in facsimile, and without the portrait showing signs of having been repaired.

Limited editions of volumes published by certain book clubs, and certain other small edition books, have fetched immense prices in American auction rooms; for example, the books published by the Grolier Club, in New York, and the books of William Loring Andrews. Why these well-printed volumes should fetch from three to four times their real value is one of the mysteries that probably will be solved to some collectors' sorrow in the future. The books printed at William Morris's famed Kelmscott Press in England already have felt this reaction.

THE MAGNIFICENT HOE COLLECTION

It is an almost invariable rule that he who buys the greatest rarities is likely to have the best investment. The most recent and most valuable illustration of the truth of this axiom is the Hoe sale. Robert Hoe would purchase only perfect copies of books, excepting where the volumes were so rare and so well worth while that this was impossible. As an investment, it is necessary to have volumes which will stand every bibliographical test; that they are the right issue, the correct edition, these facts must be self-evident. Such was the Hoe library.

It is very unsafe to expect a rise on the books of any of the contemporary writers. These rises appear to revolve in cycles. A dozen years ago Kipling first editions fetched immense prices, and some other contemporary authors found their first editions selling at large prices when their publishers had some difficulty to move the second. There was so much pure speculation in this kind of collecting that it has all but passed. These first editions were not nearly so rare as they were made to appear; other copies were turned up in abundance and the prices fell.

The general tendency of prices has been to rise. This rise has been so rapid and is reaching such high figures that it is questionable if some of those who buy at the present high tide of prices, as an investment, will not have to take a loss when they come to sell.

But where there is offered a treasure like the Gutenberg Bible — the first book printed from movable types, the rarest printed book in the world, and the chiefest possession of any collector — nothing will keep the price from mounting well up into the thousands of dollars. There was such

a prize in the Hoe sale. It was a fine copy on vellum of the Bible in Latin, printed by the first printer, and was in its original pig-skin binding. There are few copies of the book in any condition, but the Hoe copy was exceptional in all the "points" the bibliographer looks for. It was so rare a work that dealers came even from London to try for it. The Bible is in two large volumes, called folio. All estimates of its value were found wanting, and Mr. Huntington became its owner for $50,000.

One of the most suggestive of recent phases of book-collecting in America is the increasing demand for what are called association books. Several collectors do not admit any other kind of book to their collection. Association books are those volumes which, by reason of some inscription or autograph signature of some prominent person, either literary or historical, who has owned the volume, has a value entirely apart from the real value of the book itself.

Wonderful value is added to a commonplace book if it bears Washington's well known signature. A copy of the cheap edition of Dickens's Christmas Books, which happened to bear an inscription of the author, is worth at least $500, whereas an ordinary copy of the same edition will not bring more than fifty cents.

Collectors in America desire also what is called literary property — the manuscript or corrected proofs of some famous book, autograph letters of authors, publishers' agreements for celebrated books. One of the largest and most important collections of this kind in America is that formed by the late Harry Elkins Widener. Mr. Widener had no undistinguished books in his collection. He had, for instance, the original agreements made between Dickens and his publishers, Chapman & Hall, and other publishers for some of Boz's early books; he had the manuscript autobiography of Robert Louis Stevenson, still unpublished; and a copy of Sidney's "Arcadia," which was owned by Sidney's sister, the Countess of Pembroke. There also were presentation copies of books by Milton, by Thackeray, by Dr. Johnson, by Boswell — the list would be entirely too long to be included in a brief article such as this.

Mr. W. A. White, of New York, who has the finest collection of works by the poet and artist, William Blake, in existence, also is proud of owning fifty-one pages of the original manuscript of "Pickwick," by Dickens. Of Dickens's early books, very few fragments of manuscript are in existence. Mr. Edwin W. Coggeshall, also of New York, who owns a famous Dickens collection, boasts of a copy of "Pickwick" in parts with another small fragment of the manuscript.

Though South Kensington Museum has the finest Dickens collection extant, the finest collection of Thackerana is not to be found in a public library at all, but in the library of Major William H. Lambert, of Philadelphia, a collection that is famed wherever there are readers interested in the author of "Vanity Fair." Major Lambert's collection, in addition to having an enviable range of first editions of Thackeray, including every book that author ever wrote, and even every journal to which he contributed from time to time, also is rich in manuscripts of the novelist; and there is a vast number of letters of Thackeray, many of them unpublished.

One of the most costly and important general collections at present owned in the United States is that gathered by Mr. Henry E. Huntington. Mr. Huntington only a year or so ago bought the great collection of Americana of Mr. Dwight F. Church, for which, it is generally reported, he paid $750,000. At the Hoe sale he was a princely buyer and carried off some of the greatest treasures. Mr. Huntington also has gathered a fine collection of Americana, or books about America, that is generally regarded as the finest in a private library in this country. Among its treasures is the only known copy of the first printed laws of Massachusetts.

Mr. James W. Ellsworth, of New York, also owns a Gutenberg Bible — the Ives copy — for which he paid, some twenty years ago, $14,800. The price of this copy is less than the price of the Huntington copy because the Ellsworth copy is on paper and has three leaves in facsimile, whereas the Huntington copy is

regarded as perfect and is printed on vellum.

It is conceded by collectors that the finest Shakespearean collection in this country, or probably anywhere, is owned by Mr. H. C. Folger, of New York. Mr. Folger has twenty copies of the First Folio Shakespeare alone, if report be true, and also more than a single specimen of the other three. As the Widener copy is valued at $18,000, the Folger copies must represent a small fortune.

Those mentioned do not by any means exhaust the magnificent collectors in America. There is Mr. J. Pierpont Morgan, whose collection of Caxtons is the rarest in this part of the world. At the Hoe sale, he obtained the Caxton "Morte d'Arthur" for $42,800. This immense price was paid because this is the only perfect copy of that rare book known. The list of Mr. Morgan's collection of books and manuscripts never has been compiled. It is the most remarkable that man ever has brought together. It is unique, and it means little to stop a moment and note that he has the original manuscript of "The Autocrat of the Breakfast Table," and the manuscript of Ruskin's "Seven Lamps of Architecture," one book of Milton's "Paradise Lost" in manuscript, and enough early illuminated manuscripts to make the reputation of a dozen public collections. When confronted by such a magnificent display, one is staggered by the immensity and variety of the treasures and by their market value.

What should the new collector collect, to insure him against a too large drop in values? The writer put this question a few years ago to Mr. Bernard Quaritch, the London bookseller, and his reply was:

"Americana and illuminated manuscripts of the age before printing. They cannot fall in price, for they are becoming more scarce every year, while the demand increases."

It might be worth while listening to Mr. Quaritch.

THE NORTH DAKOTA MAN CROP

THE WORK OF TOM COOPER, WHO IS ENLISTED FOR THE WAR FOR BETTER LIVING

BY

FRANK PARKER STOCKBRIDGE

"NORTH Dakota is a doomed state. In twenty years it will revert to the Indian and the buffalo. We must be moving on."

This was the opinion of one of the old settlers of the Red River Valley, and there was good reason for his pessimism. Two bad years had given him a fit of the blues, but that was not his only cause of lament, for the plains farmers have learned to expect about two lean years in every ten. The cold, hard fact stared him in the face that since 1880, when the Dakota prairies were first plowed, the average yield per acre of wheat had been steadily and undeniably decreasing. According to the official statistics, the average yield of wheat per acre in North Dakota from 1886 to 1895 was 14.5 bushels; from 1896 to 1905, 12.2 bushels; from 1905 to 1910, 12 bushels. In 1911 it dropped to about 9 bushels, and this in a state that ought to be growing 18 bushels at the very least. The soil, at first so rich and miraculously responsive, had become wheat-sick and flax-sick; its fertility was giving out.

The year of 1910 was dry. In the summer of 1911, when crops again looked bad, Mr. A. R. Rogers, a Minneapolis man with large lumber interests throughout North Dakota, decided that something must be done to improve farming conditions and prevent a constant recurrence of "bad years" and the consequent impairment of the value of every investment in the state.

Mr. Rogers, who had been reading in the

World's Work of the success of Dr. Seaman A. Knapp in teaching Southern farmers how to get over the "one-crop" idea — how to diversify their crops and improve the yield — saw the close parallel between the grain country of North Dakota and the cotton country of the South. Both were "one-crop" communities. In spite of its hundred million dollars' worth of wheat and its huge crops of oats, barley, and flax, North Dakota had only 577,000 people in its whole 70,000 square miles of area. Its farmers were sticking to the small-grain crops that require tremendous acreage to be profitable and therefore mean a sparse population and meagre business. These crops also put upon the soil a strain which even the most fertile lands cannot endure.

MR. ROGERS AND THE REMEDY

Dr. Knapp's plan of taking practical information to the farmers on their own land appealed to Mr. Rogers as the remedy for the situation in North Dakota. After talking it over with the officials of the Northern Pacific and the "Soo" line he suggested it to Mr. P. L. Howe, who also has large lumber and elevator interests in the Northwest.

Mr. Howe answered with one characteristically American proposal. "Let's call a convention and talk it up," he said.

Mr. Rogers responded with another, "How much money will you give?" A convention's all right for talk, but if you want to get anything done the way to do it is to go ahead and do it."

That was the beginning of the "Better Farming Association of North Dakota." Mr. Rogers and Mr. Howe called a meeting of the bankers of North Dakota, the result of which was a campaign to raise money, under the leadership of Mr. E. J. Weiser, President of the First National Bank of Fargo.

Mr. Weiser expressed the attitude of these bankers when he said:

"We now have deposits of $3,000,000 in this bank. Of late they have not been growing. We need $5,000,000 to do business as we wish to, and we shall never get it if farming conditions don't improve. That's why I'm in this thing."

Mr. Rogers and Mr. Howe called on Mr. James J. Hill and asked him what he thought of their idea. Mr. Hill reached into a pigeon-hole in his desk and pulled out a paper which he was to read at a bankers' convention in Illinois.

"There is your proposition and the way that you want to do your work," he said. "You can be sure of my support, but you will find that this work will be extremely expensive and that it will require a long time. You gentlemen with the interest which you have are undertaking a responsibility larger than you imagine and one which, while in every way worthy, you must recognize is more than, as business men, you have a right to assume."

He advised them to raise as much money as possible, and he headed the list with a subscription for the Great Northern Railroad of $5,000 a year for three years.

The "Soo" Line and the Northern Pacific each duplicated the Great Northern's subscription. All the big banks in Minnesota contributed. Implement dealers' associations and jobbers whose business interests are largely with the farmers also helped. So did the elevator interests, the lumber dealers, and the representatives of the milling industry. In a few weeks subscriptions of $43,000 a year for three years had been obtained. Mr. Weiser was elected president of the Association, Mr. Howe first vice-president, and Mr. Rogers chairman of the executive committee. Then they went to the Minnesota State Agricultural College and demanded the name of the very best man in the whole Northwest to take over the active management of the work.

TOM COOPER

"The man you want is Tom Cooper," said Dean Woods. "We don't want to lose him, but it looks as though you have a bigger job for him than we have."

Mr. Cooper had been assistant agriculturist in charge of farm management and demonstration work for the Agricultural College and was one of the experts on cost of production for the United States Department of Agriculture. He is somewhere between thirty and forty years old,

and, in the language of the Northwest, he is a "live wire."

The Better Farming Association engaged him as director. He moved his family to Fargo in December, 1911, and by the time I visited him, in June, 1912, everybody in North Dakota was calling him "Tom."

Every county in the state was given an opportunity to contribute. In some counties the authorities made appropriations; in others, business men's organizations came forward with subscriptions; and in still others, private individuals agreed to give the necessary two to three thousand dollars a year. Eleven counties of the state's forty-nine agreed at once to coöperate. Several other counties are now ready to coöperate as soon as Mr. Cooper can get the right men to put in charge. Before the end of 1912 it is expected that at least twenty-two counties will be organized for the Better Farming movement.

"The success of our work depends entirely on getting the right kind of field agents," said Tom Cooper. "We have twenty-six men now working in fourteen counties and I could use as many more if I knew where to put my hands on them."

The first work of the Better Farming Association was to arrange for practical demonstrations in every section, so that the farmers might see for themselves exactly what the possibilities are in their own localities and on farms substantially like their own. More than six hundred men were found, each of whom was willing to operate a part or all of his farm under the direction of the field agents for periods of from one to five years. The five-year coöperators set aside parts of their farms as demonstration plats, and those who entered into the one-year contracts furnished demonstration fields for single crops. In either case the land is worked by the owner for his own profit and benefit but under the direction of the Association's agents.

Nearly eight thousand acres were set apart for the season of 1912 in these demonstration plats, which ranged in size from 20 to 80 acres. They are thickly scattered over the entire territory in which the Association operates. In Wells County alone there are 150 of them. Each of these plats is so divided among different crops as to demonstrate that, by proper methods of crop rotation, the fertility of the soil can be maintained and built up, that the hazard of crop production can be decreased, and that, through proper combinations of grain, cultivated crops, grass, and livestock, returns can be greatly increased.

THE PROOF OF ALFALFA AND CATTLE

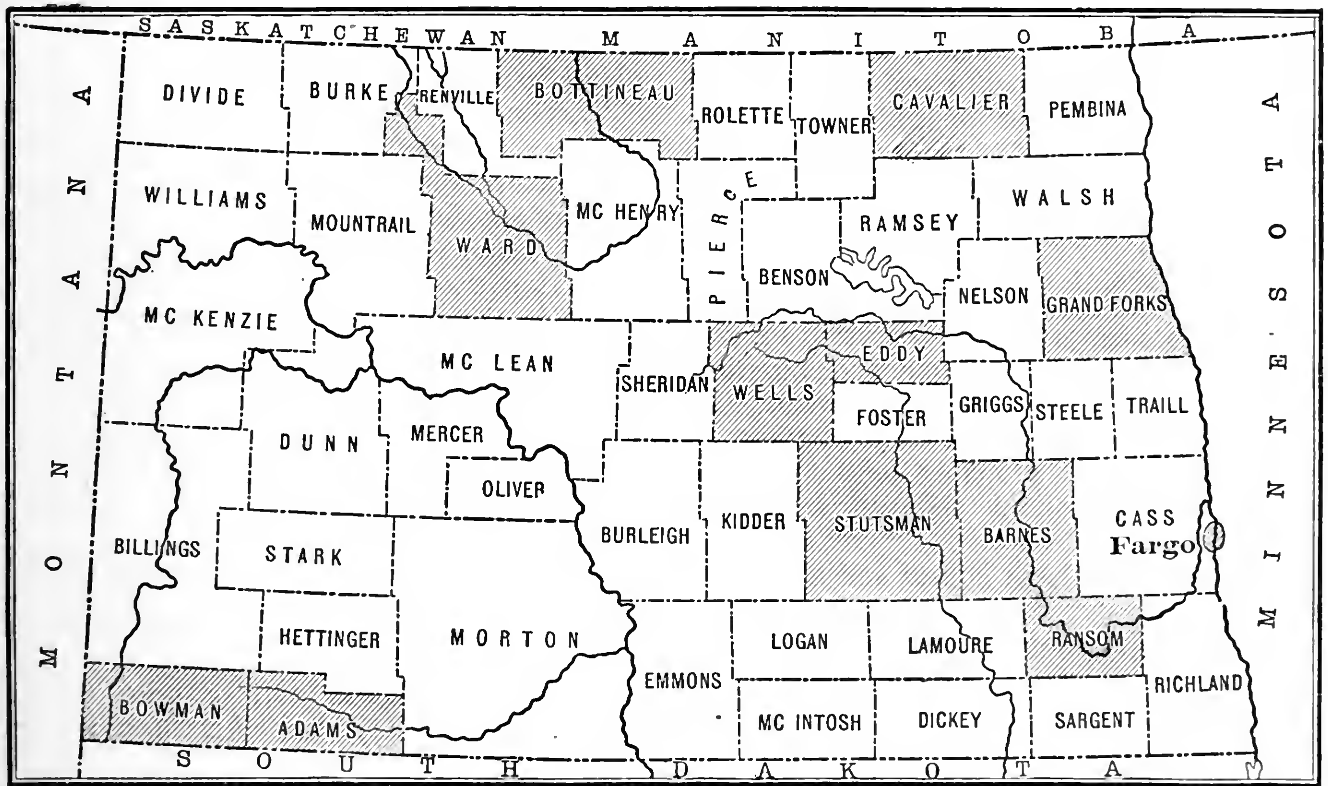
The agents are proving upon the farmers' own lands that such crops as red clover and corn will thrive as far north as North Dakota. The agents are also proving that even in the growing of the old staple crops their knowledge is profitable. Special varieties of wheat and other grains and flax, from seed selected and on land tilled by agents' directions, are revealing new possibilities in these staples. There has been little cattle farming, either for beef or dairying in North Dakota; for it has long been a tradition that alfalfa would not grow in that latitude, and alfalfa is the mainstay of the cattle farmer, particularly of the dairyman. To rid the minds of the farmers of this fallacy Tom Cooper arranged for the planting of nearly five thousand acres of demonstration fields of alfalfa; the biggest crop ever planted so far north. To prove that live stock of all classes can be raised profitably in this state, the Association has arranged with several farmers to turn over the management of their flocks and herds to the field agents, who determine methods of feeding and breeding and call the attention of other farmers to the results. And to show that proper rotation, proper tillage, the maintaining of the right kind of live stock, combined, will make any farm more profitable, a few entire farms have been placed under the direction of Tom Cooper and his men.

These demonstration farms are selected to be easy of access and representative of local conditions; they are sufficiently stocked so that a complete demonstration of the value of live stock is possible.

Still another form of coöperation is in farm accounting. In 1912 a large number of farmers, operating about three thousand acres, assisted in the work of prov-

ing the value to the farmer of accurate records of cost and income. Some of these accounting systems cover a single branch of farm work, some a particular field or crop, and some the entire farm. Data sheets furnished by the Association are filled out by the farmers and returned at regular intervals to the central office, where the records are tabulated and the profit or loss calculated.

Besides arranging for demonstration plats and fields and getting acquainted, the first spring's work of the Better Farming field agents was largely devoted salary of the field agent. In another instance the campaign for better seed resulted in the sale of more than two thousand dollars worth of good seed in a single small town. Special attention was given to the selection of seed corn and the enlargement of the corn area of the state. This activity resulted in an offer, by the First National Bank of Fargo, of prizes amounting to $300 for the highest yield of corn per acre. The Rogers Lumber Company offered prizes aggregating $200, and a sweepstake cup for the grand championship was offered by a



THE BETTER FARMING AREA IN NORTH DAKOTA

THE ELEVEN COUNTIES WHICH ARE HELPING TO SUPPORT MR. COOPER'S CAMPAIGN

to helping farmers get better seeds for the 1912 crop. Germination tests were made for more than seven hundred farmers, and in some counties arrangements were made with the children of the rural schools to make tests of their own grain. The results were surprising and valuable. Many farmers found that the grain which they had contemplated sowing was absolutely unfit for seed and would have resulted in a complete loss of the expected crop had it been sowed. In one case the saving to a single farmer who was about to sow 400 acres with seed that was found to be worthless, amounted to more than the year's farm paper. More than 300 entered this latter competition in 1912.

Many things are taught but the main point is that they are taught on the farmers' own land. To make this possible, each field worker moved with his family to the most accessible point in the 400 to 700 square miles he was to cover, making himself an essential part of the life of the community and assuming a relation to the farmer similar to that of the doctor or lawyer to his clients. His only business is to help the farmers in his district to make their farm business more profitable and their farm life more livable. Early

and late he teaches the principles of soil fertility and productiveness and preaches the gospel of diversified farming, crop rotation, live stock and dairy, better seed, and better tillage.

FROM THE AGENTS' DIARY

A few extracts from the field men's daily reports give an idea of what they are actually doing for the farmer. Under date of June 6th, one agent reports traveling fifty-eight miles by automobile and visiting five demonstration fields:

Weather fine but roads very rough. General advisory work in connection with a barn being built. Live stock work was in the nature of a veterinary adviser; found a calf at one of my coöperators' badly out of condition. Diagnosed case as tuberculosis. Owner agreed to have calf killed. Post mortem showed a very aggravated case, as diagnosed.

Another agent reports:

A very satisfactory day. Discussed ventilation of a new barn that was under construction, and owner will follow out our suggestions. He also intends to build a silo, chiefly because of our influence. Will probably build a concrete or brick silo. Docked eighteen lambs for same party.

Planned two chicken houses and a barn for three farmers.

Helped R. J. Lyness sow alfalfa.

Talked Skugmo into building good chicken house.

Sowed alfalfa for a coöperator. Talked and drew barn plans for M. Shevland in the P. M.

A DAY WITH AN AGENT

Here is the account of a field agent's work given by Mr. Walter A. Dyer, the managing edito of *Country Life in America:*

I spent one whole day with Mr. Center on his rounds through Grand Forks County. We covered 101 miles in his little runabout over rutty gumbo roads that had just taken care of an inch of rainfall, and we visited a dozen farmers of high degree and low. I could tell of many interesting things that I saw — of the enormous Elkland Farms at Larimore, with their six miles of unbroken wheat fields, where it takes all day to run a furrow up and back; of the Eastman place where we had dinner, where the farm and equipment are worth close to a quarter of a million, every cent of it wrested from the black loam of the Red River Valley; of Sadie Mathews, a young college graduate, who two years ago took hold of her father's farm, and who now works 2,000 acres successfully, is experimenting with corn and alfalfa, who with the aid of a single workman built the first concrete silo in Grand Forks County, and who still has time to make a flower garden. But it remains to tell of John Sanderson, who was a roustabout and a farm hand seven years ago, and who now owns a section and a quarter and last year built a $7,000 house. Sanderson is one of Mr. Center's most devoted converts, and this is how it happened.

Mr. Center told the farmer that he must grow something beside small grains. Sanderson was skeptical.

"I planted corn once," he replied, "but it didn't do anything."

"Let me try a piece of your ground," said Center. "I'll make it grow for you."

Reluctantly the farmer acquiesced, and when the day appointed for planting arrived Center was on hand with his selected seed. So was Sanderson, and so was an old fellow from somewhere in the neighborhood who had lived in Illinois and who claimed to be the only living corn planter thereabouts. Center gave him the seed corn, and the old corn farmer proceeded to get into trouble with the drill. The missionary watched until he was sure that both the farmer and his neighbor were at the end of their resources, when he quickly adjusted the planter, took the reins, mounted the seat, and asked Mr. Sanderson to stand at the other side of the field as a guide for the first row.

Sanderson complied with a grin. Here's where he would have fun with the professor. It was one thing to adjust a drill; it would be another thing to drive it.

Center started the horses, and as he approached the other side of the field the grin gradually faded from the farmer's face. When the horses had been turned, the farmer squinted along the row a moment and then grasped the "professor's" hand.

"Mr. Center," said he, "this is one on me, and I'm glad of it. I wouldn't take $10 for what I've seen to-day. We've had plenty of know-it-alls come out here to tell us how to farm but at last, by grief! they've sent us one that can show us. Mr. Center, you've drilled the straightest row that's ever been drilled in Grand Forks County, and every farmer in ten miles is going to see it."

"And now," said Mr. Sanderson, in telling his story to me, "I'm Mr. Center's man. If he tells me to plant a quarter section of bamboo, I'll plant it."

MR. A. R. ROGERS

WHO CAUGHT AN IDEA FROM AN ARTICLE IN THE WORLD'S WORK THAT IS BRINGING PERMANENT PROSPERITY TO NORTH DAKOTA

IN THE LAND OF MUCH WHEAT AND FEW PEOPLE

NORTH DAKOTA SUPPORTS ONE PERSON ON EVERY 75 ACRES, FOR THE ONE-CROP SYSTEM WHICH IT FOLLOWS NOT ONLY DECREASES THE FERTILITY OF THE SOIL BUT NEEDS LARGE ACREAGES TO MAKE ANY PROFIT. THIS MEANS A POOR OUTLOOK FOR THE BANKS AND BUSINESS MEN, AS WELL AS THE FARMER

He is Mr. Center's man, and to his credit be it said. He now has two fields in corn and one in alfalfa. Under the missionary's guidance he has laid out his home grounds, made gravel drives and a lawn, and planted trees and shrubs — which North Dakota needs as much as it needs corn. And the last I heard, he was figuring on a pressure tank, a bathroom, and running water through his house. John Sanderson's place will be a demonstration farm home for the Better Farming Association, and a better place for John Sanderson and his wife to live in.

In the plans of the Better Farming Association the direct increase in the material prosperity of the state is not the sole object in view. What Tom Cooper and his men are aiming at is not merely to enable the farmer to make more money, but to make life easier on the farm for the farmer's wife and children, as well as for the farmer himself. They are going at the solution of this most difficult of all rural problems in practical and well-thought-out ways. To interest the boys

THE ELKLAND FARMS — SIX MILES OF WHEAT FIELDS

WHERE IT TAKES ALL DAY TO RUN A FURROW UP AND BACK. TYPICAL OF NORTH DAKOTA'S PAST

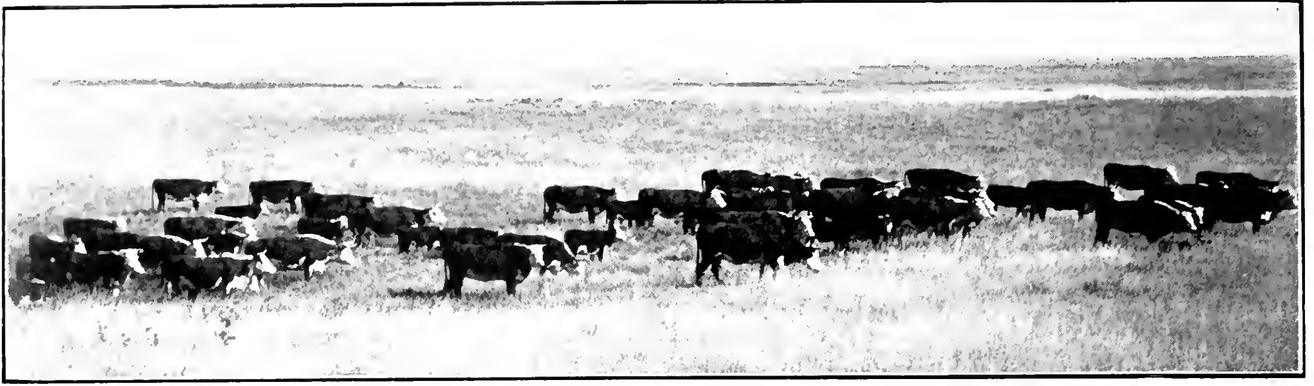
in farming, so that they will not be too eager to leave the farm for the allurements of the cities, a boys' agricultural encampment at the State Fair at Fargo has been arranged as an annual attraction. The first of these encampments was held in July, 1912. Two boys from each county in the state were chosen by representatives of the Better Farming Association, the County Superintendents of Schools and the Chairmen of the Boards of County Commissioners. The boys paid each $5 for their meals and incidental expenses, the State Fair Association providing cots, blankets, and tents. During the time they were in camp they were given a taste of military discipline, some physical training under a Y. M. C. A. physical director, a fair amount of agricultural instruction by teachers from the North Dakota Agricultural College and the Better Farming Association, and a tremendous amount of fun. Poultry, dairy products, farm crops, livestock diseases, and farm machinery and buildings were the subjects in which practical instruction was given. Moving pictures, showing the manufacture of steel and wire, and other interesting things to the farm boy were included as a part of the course of instruction, and at the close every boy was required to make a report, not only on what he had been taught, but on what he saw at the State Fair. Fifty dollars in cash prizes was divided among the boys for the best reports. These youngsters and the hundred others who will come to future encampments annually, are the ones to whom North Dakota and the Better Farming Association are looking for really permanent results.

The first steps toward bettering social conditions in farm life were taken in the spring of 1912, when twenty-seven farmers' clubs were organized in the different counties through the activity of the Association's field agents, and before the crop season was well under way many more had been organized by the farmers themselves. It is the expectation of the Association that at least five hundred of these farmers' clubs, which include in their memberships the entire families, will be organized before the summer of 1913, and that, through these clubs, social centres will be created, which will furnish a means not only for social intercourse but for community co-operation along many lines and the education of the farmer and the farmer's wife in sanitation, domestic economy, and better living conditions generally.

DEMONSTRATION FIELD OF ALFALFA AND CORN

SUPERVISED BY THE FIELD AGENTS AND GROWN BY THE OWNER OF THE LAND — A PROOF THAT THE DIVERSIFICATION OF CROPS IS PRACTICABLE IN NORTH DAKOTA AS ELSEWHERE

Besides reaching the farmers of North Dakota through personal contact, the Association has begun the publication of



DIVERSIFIED CROPS AND CATTLE

THIS MEANS MORE PROFITS, AN INCREASING FERTILITY OF THE SOIL, PROSPERITY AND PLENTY OF NEIGHBORS FOR THE FARMER, AND THEREFORE BUSINESS FOR THE BANKS AND A RICH MARKET FOR THE MANUFACTURER. THIS CONDITION IS WHAT THE BETTER FARMING ASSOCIATION OF NORTH DAKOTA IS WORKING FOR THROUGH ITS FARM DEMONSTRATION WORK.

a series of monthly press bulletins that deserve a circulation outside of the state. "Better Seed," the first of these tracts of the new farming gospel, is a masterpiece of simplicity and practical information on this vital subject. "Alfalfa," "Cultivation of the Corn Crop," and "Hog Pastures" embody the agricultural wisdom of the colleges with the experience of the best farmers. The press of the state generally reprints these bulletins and reports enthusiastically and intelligently the work of the Association's field agents. Occasionally some farmer of the "moss-back" type — they have "moss-backs" in North Dakota as everywhere else — writes a letter to the editor of his local weekly ridiculing the notion that "Eastern experts" can teach the horny-handed tillers of the North Dakota soil anything new. The appearance of such a letter is the invariable signal for a score of replies, not from the Association, whose men take no part in such controversies, but from farmers who write to tell of the benefits they have already received from the advice and help of the scorned "experts."

A FIELD AGENT AND A FARMER

MOST OF THE $86,000 A YEAR WHICH THE BETTER FARMING ASSOCIATION HAS TO SPEND IS SPENT IN GETTING THE FACTS OF FARMING DIRECTLY TO THE FARMER

Business men and public-spirited citizens in several other Northwestern states are planning similar better farming associations for their own states. Both Iowa and Illinois have made tempting offers to Tom Cooper to take the leadership of the work in those states, and some of his field agents are being urged to accept larger salaries from other communities.

"Just to illustrate what could be done with more capital intelligently used in farming," Tom Cooper said, as we talked over the work of the Association last June, "take the six eastern counties of North Dakota — the 'Red River counties.' I worked for years in the Red River counties on the Minnesota side of the line and know what they are capable of. In these six counties there is now employed in farming a capital of approximately $210,000,000, from which the annual production is $40,000,000 at an annual ex-

pense of about $7,000,000. To develop the farms of these counties to higher productive capacity would require additional fencing, stocking, the purchase of more machinery, and a general readjustment of methods. Say these things would require $35,000,000 additional capital, which at 6 per cent. would cost $2,000,000 a year. The better farming methods would involve an added annual expense of about $4,000,000. But out of this would come an increase of at least $15,000,000 in the value of the annual product, and that does not represent the best that these lands are capable of. In other words, by spending $6,100,000 intelligently, North Dakota can get an extra $15,000,000 or a good deal more than 100 per cent profit.

"Many agricultural states produce much larger proportionate returns than North Dakota. The average value per acre of all cereals, according to the census was $12.55. If we could get only as great an income as that from the entire improved area of farm lands, we should produce more than $260,000,000 a year; and if we got that much per acre from the entire acreage now in farms we should have $425,000,000 and more in annual income. And there would still be one third and more of the entire state, not now classed as farm land, to be heard from.

A NORTH DAKOTA FARMERS' CLUB PICNIC

THE BETTER FARMING ASSOCIATION ORGANIZED 27 OF THESE CLUBS. THEY ARE GROWING IN NUMBER SO THAT IT IS EXPECTED THAT THERE WILL BE 500 BY THE SUMMER OF 1913

"Such results are entirely practicable. Land no better than the average land in North Dakota is producing in Minnesota an average of $15 an acre for the entire farm, both improved and unimproved land. In other words, farming methods now in use in North Dakota are less than 50 per cent. efficient, and we are trying to raise the standard of efficiency. We are trying to show the farmers that, in order to earn at least $200,000,000 a year above expenses instead of the meagre $100,000,000 or so which they clear now, they need only to make use of the present undeveloped resources of soil and climate; to practise rotation of crops, the production of alfalfa, corn, and potatoes; and to go in for live stock, dairying, and poultry."

"How long is it going to take to get these results?" I asked.

"I don't know, but I'm enlisted for the war," was Tom Cooper's characteristic reply. "I like to think of it as a war — a war for the people's daily bread; for better living and for better men and women. For that's what it comes to in the long run. It isn't the corn crop or the potato crop that really counts — it's the man crop. But the best way to improve the man crop is to improve the other crops first. The man crop is what we are fighting for."

AN AIR LINE OVER GERMANY

THE ZEPPELIN SHIPS THAT NEVER LOST A PASSENGER — LUXURIES OF AIR TRAVEL

OUT of the bed of fog, long blades of flame shot up in a vain attempt to reach and destroy us. Then a breeze momentarily swept the fog away, and beneath were revealed, like so many volcano craters, the belching, burning chimneys of Düsseldorf's industrial centre.

For a few seconds only did this inferno flash picturesquely below us. Then we were out over the open Westphalian country. Above, the stars were paling in the morning twilight, while off on either side was a broad panorama of fairy-land. Through the thinning fog could be caught glimpses of ghost-houses. Fields took on the appearance of misty seas lashing and curling upon frowning shores formed by a wide stretch of forest. Back of that a church spire took form, then another and another, and just as the sun came to scatter the earth vapors, the pretty village of Dülmen spread its beauties before us.

The air trip from Düsseldorf to Berlin on the *Viktoria Luise* had been booked more than a month in advance by cable from New York. And it was well that the precaution had been taken, for the demand for places on the giant Zeppelin flyer is far beyond the airship's capacity. It would seem as though all Germany is clamoring for an opportunity to spend its money in the air.

The *Viktoria Luise* was advertised to leave Düsseldorf at 4:30 o'clock in the morning, and though I arrived at the airship dock a full hour before that time I found it a place of life and energy. The pilot was making a careful inspection of the great ship while it still rode at anchor within its shed. Members of the crew were testing the motors and propellers, while others were climbing through the upper structure to see that everything was right and tight.

After the arrival of my fellow passengers, who numbered twenty-three, the automatic docking apparatus drew the ship into the open, and as we entered the cabin there was not one of us who did not show evidences of a fever of excitement. Air was pumped into the last ballonet at the stern and the *Viktoria Luise* tilted her nose at a rather sharp angle toward the sky. So nicely balanced was the ship between lift and dead weight, that the driving power of the motors was required to send her upward like an aeroplane. As soon as a satisfactory level was reached the air was discharged, and we assumed a perfectly level position.

A Zeppelin airship leaves the earth with none of the balloon's soaring motion. It is just like a Pullman train, started without perceptible jar and kept in motion upon a perfect road bed, perfect track, and perfect wheels. We glided up into a southeast wind, and the low-hanging moon showed that we were speeding almost due northward. Beneath us the fog added to the darkness, and the flames, which I have mentioned, gave to the earth an evil appearance. Although we were at a safe height it was pleasant to get out over the open country and away from the fires that burned under Düsseldorf's melting pot.

Leaving Dülmen behind, the northern foothills of the Teutoburger Wald stretched across our course. All three motors were running, though not, I was told, at top

speed, and we were making about forty-four miles an hour. On another trip the *Viktoria Luise,* under normal conditions, covered a fraction more than forty-nine miles an hour.

Bremen came to us a little before seven o'clock, and as we swept in wide circles above the city, we could see its armies of men going to their work. They were little interested in us. The airship is an old story in Germany. Occasionally one in the street would wave answer to our frantic greetings, but for the most part they went their way giving to us no apparent thought.

Over the country it was different. Farmers with their house-wives and their children were willing to pause in their work and watch the droning monster overhead. Cattle seemed to regard us as a direct menace to themselves. Perhaps they thought the airship some great bird of prey. For an instant they would stand gazing up at us, then would scurry away, apparently seeking cover.

Hamburg was reached just an hour and a half after we left Bremen behind. Again we made great loops over the city, which, with its harbor, wharves, and houses was spread out as though it had been modeled of clay. The hum of thousands of voices came up to us and could be heard above the clatter of our own motors.

From Hamburg we took a southeast course against the wind, traveling in the direction of Berlin. At noon we were flying up the Elbe Valley by way of Bergedorf and Dömitz. In another two hours we reached Wittenberg.

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UP OUT OF THE SMOKE AND DUST

TRAVEL BY AIRSHIP IS AS CLEAN AS IT IS BEAUTIFUL

In the meantime individual tables had been placed in position, and luncheon was served much as it is in the ordinary buffet dining car in America. There was soup, an entrée, a roast — all piping hot — vegetables, salad, cheese, and coffee. More of a dinner than a luncheon and all served as though the chef and waiters had the conveniences of a great hotel at their command. The principles of the fireless cooker had been brought into

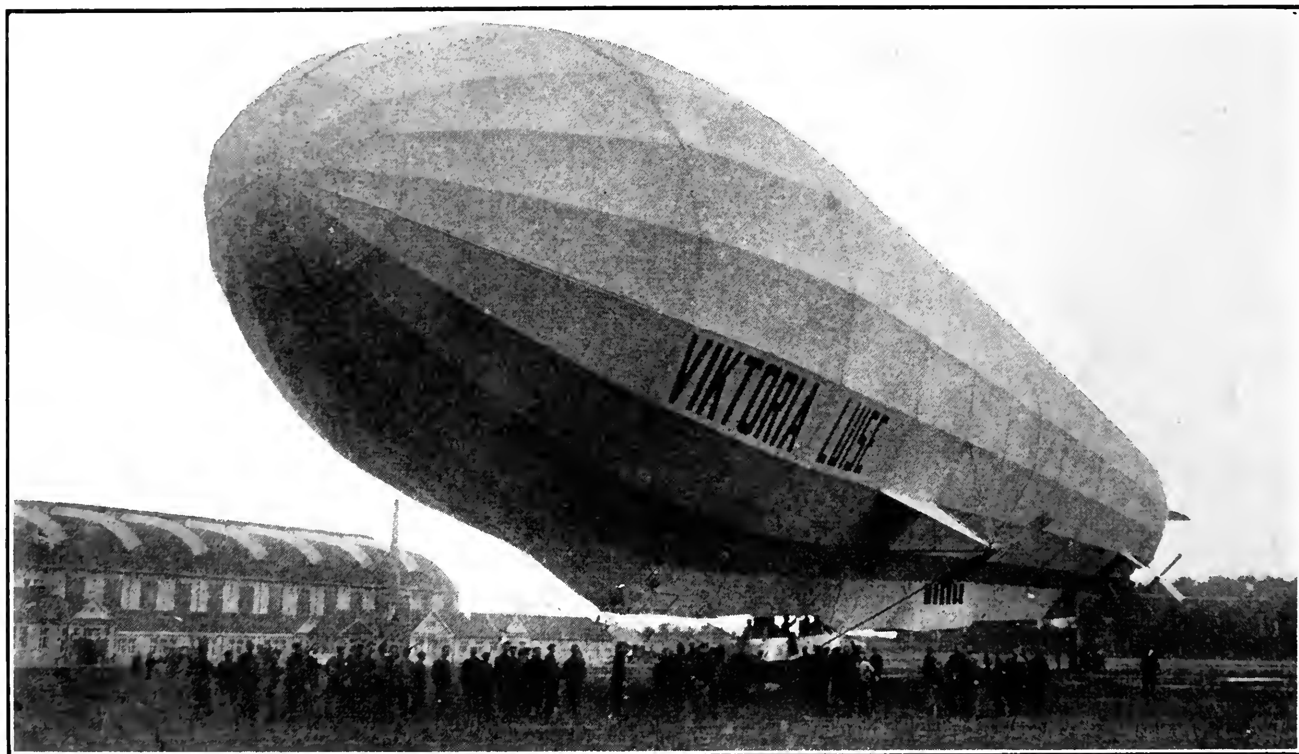
service in preparing the food, the exhaust from the engines being made to supply heat.

After luncheon several passengers dozed comfortably in their armchairs enjoying the sun that shone through the starboard windows. A better place for an afternoon nap than the cabin of a Zeppelin airship cannot well be imagined. The drone of the motors becomes a lullaby. There is the sense of motion — swift motion — and yet not even the slightest jar. An almost imperceptible vibration is felt only when a hand is placed on a side wall of the cabin.

but German reticence made it impossible for the passengers to learn results.

After Nauen, Spandau and Charlottenburg came quickly into view. We were over the Imperial palace fifteen minutes before four o'clock, having made the flight from Hamburg in less than four hours.

Following the Spree River we came in five minutes to the Air Traffic Company's dock. The *Viktoria Luise* pointed her bow toward the landing place and the three motors drove the big ship downward as though we intended to crush the group of workmen waiting to receive the landing ropes as they were cast off.



Photograph by the Transatlantic Co.

THE AIRSHIP "VIKTORIA LUISE," CAPTAIN HAECKER

ON THE REGULAR PASSENGER ROUTE FROM DÜSSELDORF TO BERLIN, 400 MILES IN 12 HOURS

For the purposes of a laboratory the airship is ideal. It has been proposed, and seriously, by German surgeons, to turn the cabin of the *Viktoria Luise* into a temporary operating room when certain delicate surgery has to be performed. The upper air is so pure that it really acts as an antiseptic and removes all danger of poison.

Shortly before three o'clock we passed the lofty wireless tower at Nauen, from which messages have frequently been sent to and received from stations 3,000 miles distant. Our own wireless was busy,

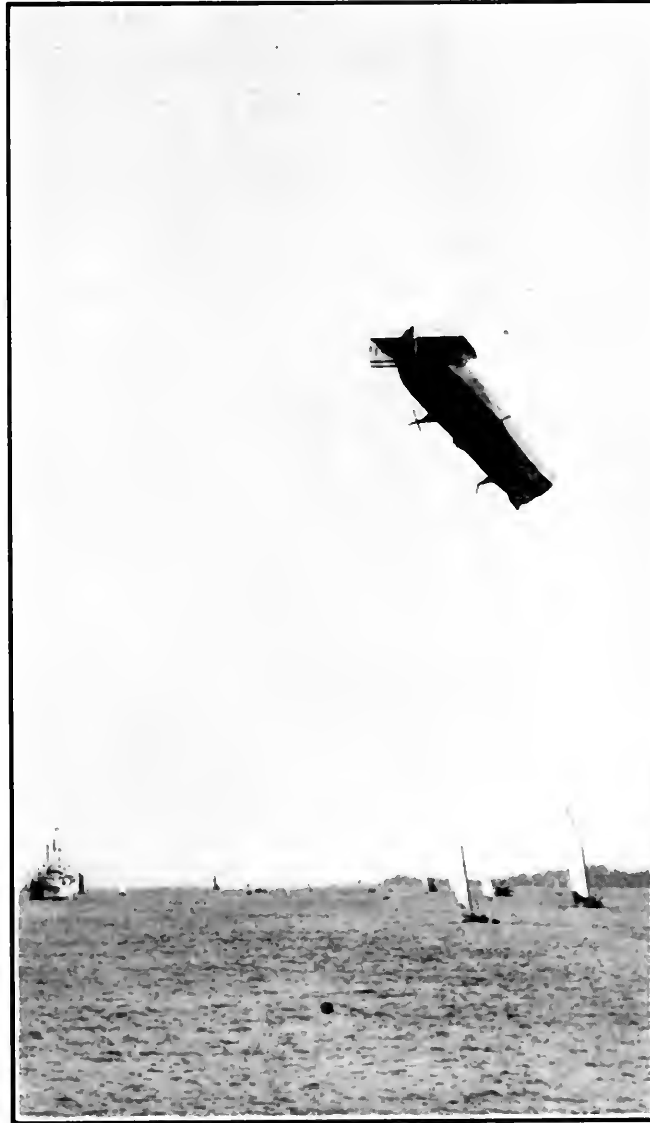
Here we experienced the only difficulty of the voyage. During our 400-mile trip we had lost nearly a ton of weight as the result of the burning of fuel. The ship, in consequence, was so buoyant that when the motors were slowed down it shot into the air before the dockmen could make the landing ropes secure.

At a height of about 1,000 feet a small amount of gas was discharged. Again the bow of the ship was pointed earthward and our motors sent us to the landing place. This time the hawsers were caught and in another moment the

Viktoria Luise was clamped to the heavy motor trucks which drew us into the great barn-like shed where we disembarked.

From the time we took our places in the cabin of the *Viktoria Luise* until we again stepped out upon solid ground, just twelve hours had elapsed. During that time we had come from Düsseldorf — against a wind that at times had a velocity of twenty miles an hour — by way of the seashore to Berlin. There had been no untoward incident. Every moment of the voyage was filled with pleasure. We came to earth rested and refreshed, with none of that dusty, worn feeling that fastens upon a person during a railroad trip. That we were fortunate in the weather encountered is true, but it is also true that no Zeppelin airship has ever had a serious accident while in the air, though several have been destroyed while riding at anchor.

That the sun does not always shine for the airship, however, is testified to by Captain Stelling, of the Parseval Airship Company, who is known in Germany as the Father of Aerial Navigation. The Parseval airships, unlike the Zeppelins, are non-rigid, but none the less have been operated with much success between the larger German cities. Captain Stelling recently told of his encounter with a storm during a voyage of the *Parseval III*, of which he had command.



FLYING OVER THE YACHT RACES AT KIEL

NO ZEPPELIN HAS EVER BEEN SERIOUSLY DAMAGED IN THE AIR (THOUGH SEVERAL HAVE BEEN DESTROYED ON LAND) AND NO LIVES EITHER OF PASSENGERS OR CREW HAVE BEEN LOST

"Though we had been making good headway against a 25-mile wind," said Captain Stelling, "I knew we were in for trouble. A thunderstorm came up against the wind, which, increasing in violence, brought us to a dead standstill. The first squalls struck us while the ship was 300 feet in the air. They pushed us back, and then a cloudburst deluged us, adding greatly to our weight and making it impossible for us to gain headway.

"I dropped loser to the ground, where the drag of the earth always makes the wind a trifle weaker. But our position was decidedly perilous. On one side was a village, on the other, a forest, and before us a high hill. Almost hugging the ground, we tossed about in that narrow steerage-way. As a squall would pass, we would make a great leap forward. In one of these jumps we came near destroying a herd of cattle bunched together to escape the full force of the wind, which at times touched forty-five miles an hour.

"The passengers were severely shaken. Both drag ropes had been given out, that I might land if the storm lasted until night. After wrestling two hours, the airship, still scraping along, began to advance slowly against the storm. The drag ropes then hindered us so that I cut one loose and hauled in the other which come up covered with mire.

"Then we made better headway against

the still heavy wind, but with the earth only sixty feet below we were in constant danger of colliding with trees and houses. Yet I dared not go higher in the air.

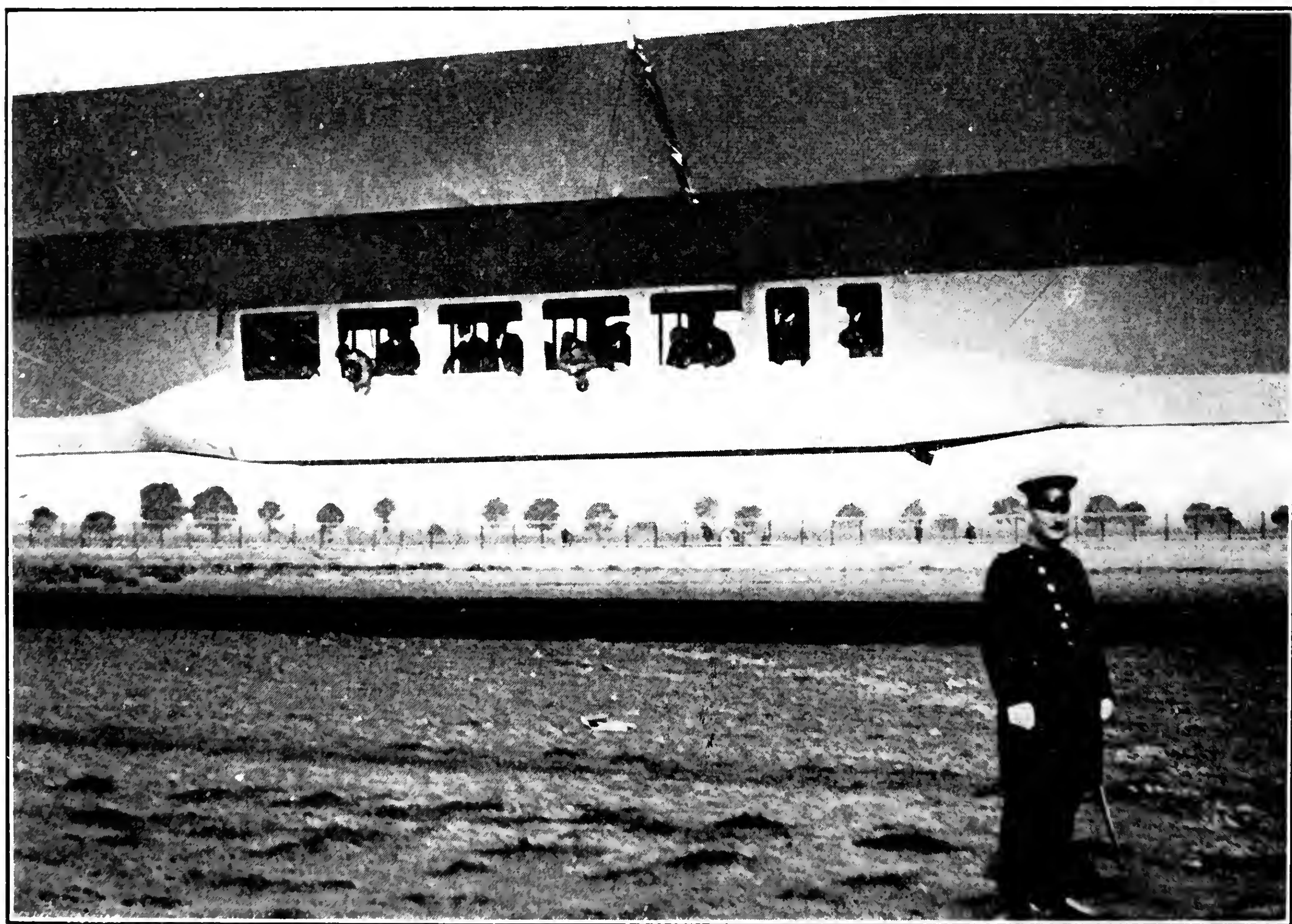
"At last the wind slackened somewhat, and rising to 220 feet we reached Augsburg at nightfall. There I anchored and the ship lay exposed all night to rain and a wind of twenty-three miles an hour. After all, the damage was slight and the *Parseval III* made its regular trips the next day."

Few Americans realize the progress that is being made by the builders of German airships. It is unfortunate that this is so, for it is seldom that America permits itself to be left so far behind as it has been by Germany in the race for supremacy in the air. Count Zeppelin has demonstrated thoroughly and practically that the airship has come to stay. It is a commercial success — a luxury, perhaps, of to-day; a convenience and necessity of to-morrow.

The *Viktoria Luise*, crude compared with the aircraft of the future, is as true a ship as any that rides on the water. The air is its element, and in the air it presents a picture of safety. It was launched early this year (1912) and from its first trial has been a success.

Built, as are all Zeppelins, with a rigid framework of reinforced aluminum, it has eighteen "napkin-ring" sections each containing a gas-tight bag — a total gas capacity of 681,600 cubic feet. Over the framework is stretched a heavy cloth covering that is impervious to rain or snow. Upper and lower decks furnish surfaces that serve the same purpose as do the wings of an aeroplane when it is desired to drive to a higher or lower air level.

The individual gas bags are not fully inflated before the ship starts on a voyage. Slack is left to accommodate the expansion of the gas in the upper air. Safety valves with indicators on the pilot's desk make it almost impossible for any one of the gas bags to explode, but six of them



A FULL PASSENGER LIST

THE ACCOMMODATIONS ON ALL THE GERMAN AIRSHIP LINES ARE TAXED FAR BEYOND THEIR CAPACITY THOUGH THE FARE IS ABOUT 12 CENTS A MILE

might come to grief at one time without endangering the airship, so great is the sustaining power resulting from speed.

The *Viktoria Luise* is just short of 486 feet in length and has a breadth of 46 feet. It has three 6-cylinder Diesel motors with a combined horse power of 450. A speed of 50 miles an hour has been made with atmospheric conditions normal. If, by some rare accident, two of its motors should be rendered useless, the third would be sufficient to give headway against a 27-mile wind.

Captain Haecker, who commanded the *Viktoria Luise* in the trip from Düsseldorf to Berlin that has been described, has little fear of storms while his ship is in the air, though Germany's excellent weather forecast service makes it possible for flights to be so timed as to avoid the ordinary wind storm. Each Zeppelin carries a wireless outfit and from land stations obtains reports of weather conditions. Detours are made and local air disturbances are dodged.

The world is just beginning to learn something of the science of air navigation. There are permanent air streams corresponding to the Gulf Stream. There are air tides, and there are temporary "rivers" that will be taken advantage of by the skilled navigator.

Captain Haecker, while putting the *Viktoria Luise* through trial flights last spring, one day found his progress retarded by a 30-mile breeze that seemed to cling to the earth's surface. At a height of 1,800 feet he found a stratum of calm air, and driving a thousand feet higher entered a 15-mile current that carried his ship in the exact direction he desired to go. On another occasion he ran into a tempest, but by turning fifty miles out of his course, being directed by wireless reports, he found favorable conditions and made his destination without the slightest trouble.

IN A ZEPPELIN CABIN

EASIER RIDING THAN A PULLMAN CAR. THE AIRSHIP CABINS HAVE COMFORTABLE CHAIRS, PERIODICALS ARE SUPPLIED, AND MEALS ARE SERVED

Those who go up into the air in ships to-day find themselves surrounded with the comforts of a very modern hotel. The cabin is kept at an unvarying comfortable temperature by means of pipes that carry the exhaust heat from the engines. There is more room for action than in an ordinary chair car. In the lavatories are hot and cold water. There is a library with the daily papers and the best of books. There is a lounge for those who are willing to sleep away the hours of flight.

The German air traffic companies maintain a regular schedule. Travel in the air there is no fad. It has been commercialized and the owners of the ships are receiving handsome profits on their investments.

LLOYD-GEORGE'S ENGLAND

THE LIBERAL GOVERNMENT UNDER LLOYD-GEORGE REMAKING THE CONDITIONS OF HUMAN LIFE IN ENGLAND — INSURING A NATION AGAINST SICKNESS AND TWO MILLION WORKERS AGAINST UNEMPLOYMENT — OPENING THE LAND TO THE PEOPLE — OLD AGE PENSIONS — REALIZING A VAST SCHEME OF SOCIAL REGENERATION

BY

CLARENCE POE

(AN AMERICAN JOURNALIST WHO HAS BEEN STUDYING CONDITIONS IN GREAT BRITAIN)

IT WAS Carlyle, I believe, who, tiring of political sham and all other kinds of sham, demanded a "Condition-of-the-People Party" in England; and Liberalism there, with its mighty programme of social reform, seems to furnish at last a realization of his dream.

What strikes an American observer first of all is the shocking and impious lack of respect for time-worn political catchwords, formulas, and theories of government, such as our politicians at home are wont to make fetiches of; and the general agreement with Mr. Lloyd-George that the supreme task of Parliament members is to "ameliorate the conditions of their less fortunate fellows," "organizing the best of all to avert the worst from each." A government once concerned only with the conditions of foreign trade, the quieting of the irrepressible Irish, and the extension of its far-flung battle-line, has suddenly discovered, in the language of its most conspicuous representative, that "the Empire depends for its strength, its glory, nay, for its very existence, upon the efficiency of its people." And, although the speeches in Parliament I have heard and read leave me no room to doubt that England will spend her last farthing rather than sacrifice her mastery of the seas, it was Mr. Winston Churchill, now First Lord of the Admiralty, who said in a speech not long ago, "The supremacy and predominance of our country depend upon the vigor and health of its population, its true glory is in the happiness of its cottage homes."

England, moreover, has not only talked these things, she has acted on them. And

LLOYD-GEORGE EXPLAINING HIS POLICIES

THE CHANCELLOR OF THE EXCHEQUER, WHO IS INTERESTED NOT IN POUNDS AND PENCE BUT IN PEOPLE AND WHOSE MEASURES PROVIDE FOR A SICKNESS INSURANCE THAT REACHES 14 MILLION WORKERS, UNEMPLOYMENT INSURANCE, AN OLD AGE PENSION ACT, AND A NATIONAL HEALTH CRUSADE

in doing so, she has gone far ahead of America in many respects. Just before the Fourth of July, when our orators at home were drawing deadly parallels between democratic America and "monarchical England," I was at a dinner where a famous British journalist rallied me on coming from "a high Tory country!"

Leader of the new English movement and its fittest exponent is the Right Honorable David Lloyd-George, Chancellor of the Exchequer in His Majesty's Government, an official, one might not unnaturally think, concerned only with pounds, shillings, and pence, budgets, balances, and bankbooks! Who ever heard of an American Secretary of the Treasury mapping out a programme of social reform? It is not, however, exchequers, but equality; not pounds or pence, but people, that Mr. Lloyd-George is interested in — the stocky, fighting Welshman who does not give aristocratic England time to leave off gasping from one surprise before he explodes another bombshell under its nose. He and his allies are not only remaking the conditions of British politics; they are remaking the conditions of human life in Britain.

Mr. Lloyd-George indeed translates every political action into its human terms; and it is for this reason — not that he is abler than the cool, logical, far-seeing Mr. Asquith, or the brilliant and versatile Winston Churchill—that he is the foremost figure in English Liberalism. A passionate sympathy for all the poor, for all the suffering, beats in the blood of the man who tasted the bitterness of poverty as a fatherless lad and who owes his education to the aid he received from a poor shoemaker-uncle; and it is this passion that burns in his speeches, nerves him in his struggles, and drives him from one colossal plan to another. "When insults hurtle through the air," I heard him say in concluding a great speech on the Insurance Act the other day, "I can always see a vision which sustains me. I can see the humble homes of the people with the dark clouds of anxiety, disease, and privation hanging heavily over them; and then I see another vision — I can see the Old Age Pensions Act, the National Insurance Act, and" — he added significantly — "many another act in their train (Hear, Hear!), descending like breezes from the hills of my native land and clearing the

FROM WHOM THE TAXES HAVE BEEN LIFTED

"TAXATION HAS BEEN LARGELY SHIFTED FROM THOSE LEAST ABLE TO BEAR IT TO THOSE MOST ABLE", AND A SHARP DIFFERENCE HAS BEEN MADE IN THE TAXATION OF EARNED AND UNEARNED INCOMES

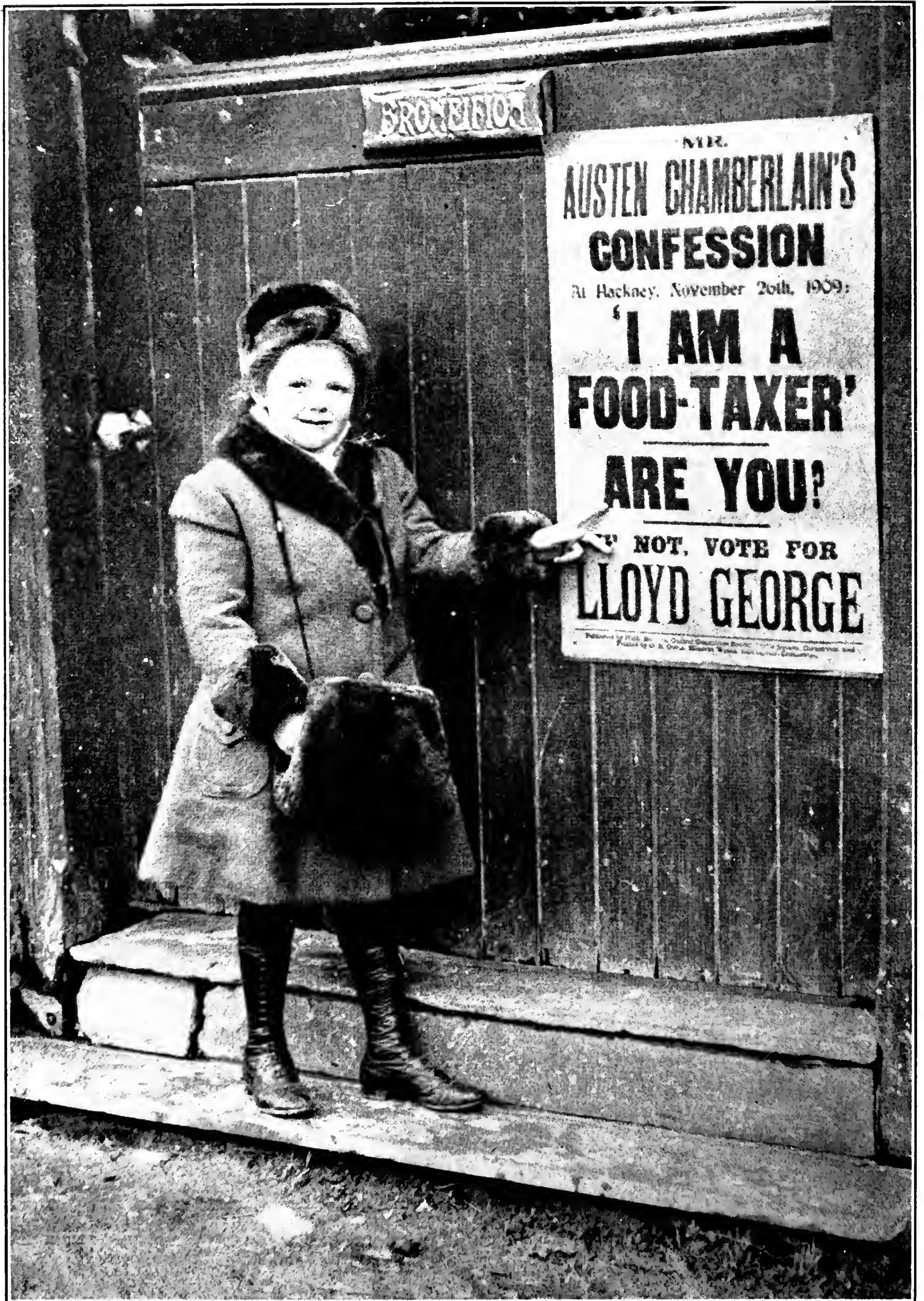
AN OLD AGE PENSION FOR THE POOR
TO THREE QUARTERS OF A MILLION OF SUCH AS THESE ENGLAND PAYS $1.20 A WEEK

gloom away until the rays of God's sunlight have pierced the narrowest window."

It is inspiring to talk as I have talked with the leaders of this Condition-of-the-People Party in England, men terribly in earnest and yet untouched by fanaticism. "We have inaugurated a crusade against poverty," they will tell you, "and not merely a crusade against poverty, but a crusade against disease and degeneracy." "We are going to have a new race of people," said one Progressive member of Parliament to me as he talked of the now universal medical inspection of school children, the better medical treatment and wiser methods of sanitation and hygiene that should become universal as a result of the Insurance Act, and the back-to-the-land movement encouraged by the Small Holdings and Allotments acts.

Certainly the Liberals are breaking new ground. If St. George slew mythical dragons in a fabulous age, Lloyd-George is freeing England from very real dragons in our own age; and our contemporary George the Dragon Slayer is no respecter

ONE OF THE ENGLISH LABOR EXCHANGES
WHICH HAVE BEEN IN SUCCESSFUL OPERATION FOR THREE YEARS. THE NEW "UNEMPLOYMENT BENEFIT" OF $1.68 A WEEK GOES ONLY TO WORKERS WHO HAVE APPLIED TO ONE OF THESE EXCHANGES



LLOYD-GEORGE'S DAUGHTER

AND A SIGN OF HER FATHER'S POLICIES WHICH ALONG WITH HUMANITARIAN LAWS EMBRACE FREE TRADE, THAT IS TO SAY, UNTAXED FOOD AND CLOTHING FOR THE MASSES

of the established order of things merely because it is the established order. An evil gets no claim of tenure with him or his allies even though it show "undisputed possession" since the days of Alfred. From time immemorial, for example, the menace of want has threatened English men and women in their age; palsied and smitten with years, if want came they sacrificed self-respect by begging relief as paupers or "went down to their graves cursing the land that gave them birth." But the fact that this had always been the case constituted, in the eyes of Mr. Lloyd-George and his associates, no reason why it should always be the case, and now, to nearly a million necessitous old folk past their three score years and ten, the post-office pays two glistening half crowns ($1.20) as regularly as the weeks come.

From time immemorial, too, as the Liberal leaders saw, the poor have lacked adequate attention in sickness, and not only have millions gone to premature graves in consequence, but the efficiency of the whole working population has been lowered. So Mr. Lloyd-George, "thinking in continents," as was said of Cecil Rhodes, conceived the idea of insuring the whole nation against sickness. The outcome is the National Health and Insurance Act, affecting 13,000,000 workers; a bill pronounced by Sir Rufus Isaacs "the greatest effort of constructive statesmanship ever made to remedy the evils and alleviate the miseries caused by sickness and unemployment."

This new Insurance Act, about which I found all England divided as definitely and almost as fervently as it was in the days of York and Lancaster, is certainly the most notable and daring attempt at "organizing the best of all to avert the worst from each" that has so far been set down to the credit of what I have called the Condition-of-the-People Party in England. Germany, of course, has had health insurance for nearly a generation and Mr. Lloyd-George went to Germany to study her plan, but his insurance scheme, seen in the light of English history and English temperament, is a bigger achievement.

Nearly 14,000,000 people are to be united in one great coöperative brotherhood for helping those who become sick or unavoidably out of work; and although it would take a considerable section of the British Museum to house the books and pamphlets already written to explain the measure, I think I can summarize its outstanding features in five brief paragraphs:

1. Every manual laborer in Great Britain, and every other person in any occupation who earns less than $800 a year, will be insured; the age limits being sixteen and seventy.

2. Every worker pays eight cents a week, his employer contributes six cents and the Government four cents; and the total amount of eighteen cents a week thus set aside for every insured British workingman will constitute the general insurance fund from which benefits will be paid.

3. In the case of a woman worker, her employer pays six cents, and the Government four cents, but she herself pays only six cents a week; a total of sixteen cents therefore being set aside for each insured woman as against eighteen cents for each insured man.

4. If the employer pays a low wage, he must pay not only his own normal six cents for every person that he employs, but also a part or all of the worker's own contribution — a feature intended to penalize "sweating" and low wages generally.

5. Persons not hired out but working for themselves, if earning less than $800 a year, may be insured by paying the employer's six cents and the employee's eight cents a week, to which the State will add four cents.

It is estimated that the employers will contribute $45,000,000 and the employees $55,000,000 the first year, and the State will contribute $22,500,000. In this way the enormous sum of $122,500,000 will be available for benefits. And these benefits — the return that the worker gets for his payment of eight cents a week supplemented by the employer's six cents and the State's four cents — may also be summarized under five heads as follows:

1. If an insured man gets sick, the State pays his doctor's bill and necessary drug bill. He pays no more doctor's bills.

2. If he is sick six months or less, the

State pays him a sickness benefit of $2.40 a week.

3. If he is sick longer than six months, or permanently disabled, the State pays him $1.20 a week from the beginning of the seventh month until death or recovery.

4. In case he develops consumption he can get free treatment in a State sanatorium.

5. In case a child is born to him, a maternity benefit of $7.20 is given the mother.

For an insured woman the benefits are the same as those allowed a man, except that for the first twenty-six weeks of an illness a woman receives only $1.80 a week instead of $2.40. Neither men nor women are required to pay anything when sick or unavoidably out of work.

A CAMPAIGN AGAINST TUBERCULOSIS

These are the features of the bill on which public attention has been centred, but in the opinion of Mr. Lloyd-George its "most fertile and helpful provisions" are those which look to the prevention of disease rather than its cure. The most important points are the appropriation of $7,500,000 the first year as the beginning of a nation-wide crusade against tuberculosis — in a thrilling utterance a few days ago I heard him declare that the campaign would be continued, the methods for prevention and cure developed and extended "until we stamp this curse out of the land" — and the provision for establishing local health committees, charged with the duty of seeing that all health laws are enforced and that a vast scheme of public instruction in all matters affecting personal and public health is carried on. It is expressly provided that, in cases where sickness is due to bad housing, the extra cost of health insurance shall be assessed against the owners of the disease-breeding slum property.

So much attention has been excited by the sickness insurance features of this bill that the foreign public is hardly aware of the provision for insurance against unemployment, which would alone make the bill memorable. It is recognized that insurance against unemployment is yet in its experimental stage; and hence only 2,500,000 workers — those engaged in building, ship building, mechanical engineering, etc.— are to be reached through the unemployment feature of the bill, as against 14,000,000 reached by the sickness feature.

To the unemployment insurance fund each insured man, while at work, pays five cents a week, to which his employer must add five cents, and the State three and one third cents. Then if at any time he is genuinely unable to get work he will receive an "unemployment benefit" of $1.68 a week for not more than fifteen weeks in any given year — not a large sum, but enough to keep the family from the starvation which, under present circumstances, often haunts the English worker out of a job.

Of course, there are strict provisions to prevent the State from being imposed upon. For one thing, one finds all over England now the remarkably successful "Labor Exchanges," first established three years ago — places where men without work can apply for jobs and persons who have jobs can apply for workers — and these exchanges must receive the application of any unemployed man before a pension is allowed him. Then, too, the act is further safeguarded by providing that no man will receive unemployment benefit if out of work because of a strike or lockout or through his own misconduct or through giving up a place without just cause. Moreover, the loafer's hope vanishes in view of the provision that no man can receive more than one week's pension for five weeks' contribution as a worker; and a workman who is chronically unemployed through lack of skill may be required to attend a suitable course of technical instruction or be dropped from the list.

"NO PARASITE DEMOCRACY"

Now, whatever other defects the reader may find in the scheme, or imagine he finds, he can hardly complain that it is a socialistic coddling of the masses, or an easy bid for popularity. "Nobody who understands the English character," as I heard a Liberal leader say two days before the law went into effect, "would attempt to win popularity by compelling a Britisher

to do anything, no matter what." It is a plan for "organizing the best of all to avert the worst from each," a plan of co-operation not unlike that of Alpine mountain-climbers, who bind themselves together with ropes so that when an individual stumbles, the combined strength of his fellows helps him to his feet again; but it involves too much self-help and carries too little of the "flowery beds of ease" idea to please believers in socialism. The bitterest denunciation of Mr. Lloyd-George and his scheme, indeed, I have heard not from Conservatives but from Socialists, and the Welsh Chancellor himself recognizes that his plan does not please them nor anybody else who expects the State to coddle the entire population. "I might have raised the workers' share of the insurance fund by increasing the income tax on the wealthy," he says. "But had I done so, it would not have done as much good to the working classes as giving them the knowledge that they are contributing something. To let them expect all to be done for them by gifts, alms, and charity is not statesmanship. That is the sort of thing that would create a parasite democracy such as ended Rome."

It is well indeed that England makes a sharp distinction between her plans for bettering the conditions of the adult workers and her plans for helping children and aged people. The adult workers learn the lesson of self-help, but it is recognized that the State must help freely the child for its own future, and the aged poor in gratitude.

The Old Age Pensions Act, which is one of the landmarks of Liberal legislation, is entirely non-contributory. Of course, no pension is paid an old man if his poverty is due to idleness; and a man is also disqualified if he has been recently imprisoned for any serious offence. But it is thought fair that, if a man has spent seventy years as a worker in creating wealth for the State, and as a taxpayer in contributing to public funds, he should receive, if his income is less than $100 a year, this modest old age pension; and more than half a million needy old men and women in England, 200,000 in Ireland, and smaller numbers in Scotland and Wales, now receive freely of the State's bounty.

It is a pathetic story that Mr. Lloyd-George tells concerning the inauguration of the act. A group of old men and women had gathered around a country postoffice, but were really unable to believe that such a boon had been provided for them. They feared that they were being fooled; that it might prove only a practical joke. But at last one old, palsied, white-haired man ventured in and came out with his five shining shilling pieces, and the rest

SPECTACULAR METHODS OF THE REFORMERS

A "CONDITION-OF-THE-PEOPLE" PARTY, WHOSE WATCH WORD IS "TO ORGANIZE THE BEST OF ALL TO AVERT THE WORST FROM EACH"

crowded after him in a childish delight. It was touching to see.

Long before the Liberals began their present lease of power, the Conservatives in England declared for old age pensions; and no measure perhaps has ever proved more universally popular. Much of the money had been disbursed before — only in the form of pauper relief; and local taxation for "poor law aid" has been much reduced since the pensions were in-

augurated. And to the old what a difference between a pension paid in gratitude by the State and the pauper's dole that they were formerly forced to beg in exchange for their self-respect!

The limitations of a magazine article make it impossible even to enumerate all the measures for bettering the condition of the people which either have been adopted since the beginning of the Liberal administration six years ago, or are now pending.

Taxation has been largely shifted from those least able to bear it to those most able. The productive forms of wealth, the gains of thrift and industry, are less heavily burdened; the gains of chance or inheritance more heavily. The great landlord who so long largely escaped his fair share of taxation no longer has his ancient immunity, and, in the future, one fifth of the "unearned increment" in urban land values— increases due not to the industry or skill of the owner but to the growth of the country and the development of society — will be taken by the State for the further strengthening of the public weal to which the whole increase is due. A sharp difference has also been made in the taxation of earned and unearned incomes, the wealthy man or woman who really earns $10,000 a year being taxed at the rate of only three and three fifths per cent., while those with unearned incomes of $10,000 or more pay five and three fifths per cent. A reduction, in fact, has been made in the tax on earned incomes of less than $10,000; and persons earning less than $2,500 have been granted an abatement for each child under the age of sixteen. In the future, too, a larger share of the public revenues will come from the better paying public-houses or saloons — even if their increased burdens are not so great as to justify Mr. F. E. Smith's remark that "when you give a publican sixpence for a drink, you get one penny worth of whisky and five pence worth of Lloyd-George!"

The health and living conditions of "the myriads who toil" have been improved in almost numberless ways. In the sweated industries, where the picture presented in Hood's "Song of the Shirt" had long been a tragic reality, a minimum wage has been established, and protection thus thrown around the most helpless class of the industrial population. The Workmen's Compensation Act insures relief to laborers injured in the course of their duties. In nearly every shop window in Great Britain now a printed notice advises the public that, "under the new 1912 Shops Act," a half day's holiday is allowed to all clerks once each week. In the future the growth of slums will be prevented by the new Town-Planning Act; and in the great cities at present one finds sanitary and even attractive dwelling places for the poor in sections where hideous slum plague-spots once existed, the new houses being owned and rented by the Government, which purchased and destroyed the old disease-breeding quarters. Under the act of 1909, every County Council must employ a health officer to give his whole time to his duties, and so great is the interest in better sanitation and hygiene that almost every Britisher might be called an assistant health officer. "The English people are simply mad about health," Sir Robertson Nicoll said to me the other day.

The usefulness of the Post Office Department — already with fully developed parcels post, savings bank, and life insurance features, so largely absent in our American postal system — has been further strengthened by the purchase of the telephone; and telegraph, telephone, and parcel rates are about one half what Americans pay.

The encouragement of forestry and many other lines of agricultural wealth are provided for in the Development Act; and a notably liberal grant has been made to the Agricultural Organization Society, charged with the duty of promoting co-operative enterprises among farmers.

THE SETTLING OF OLD POLITICAL PROBLEMS

Coming to strictly political matters, a bill has been framed to abolish plural voting, so that the wealthy man hereafter, instead of voting in each section where he has property, will cast but one ballot. Provision has been made for paying small salaries to members of Parliament, thereby rendering it easier for men without wealth to enter the public service. The House

of Lords has been shorn of its ancient power — the threat to create new peers bringing the members to terms as quickly as did the famous and not dissimilar French threat to "create so many dukes that it would be equally a disgrace to be one or not to be one" — and now any measure approved by the House of Commons at three successive sessions becomes a law, regardless of what the lords temporal and spiritual think of it. And finally, since the Lords' veto no longer intervenes, Irish Home Rule, once so bitterly denounced in England, is about to become a definite reality. Ulster, of course, is breathing forth threatenings and slaughter, but the Liberals are pledged to Home Rule, and many of the Unionists or Conservatives, like the unjust judge in the parable, want some rest from Ireland's continual worrying of them. "The Irishman, they say, 'doesn't know what he wants, but won't be happy till he gets it,' " said a Unionist member of Parliament to me, intimating his desire to be permanently rid of the whole agitation.

Of tremendous social significance are the Small Holdings and Allotments Acts, whereby county councils are empowered to purchase land for sale or lease in "allotments" of one to five acres or "small holdings" not exceeding fifty acres. I found Mr. Nugent Harris, Secretary of the Agricultural Organization Society, keenly enthusiastic over the success of the allotment plan. "There is Worcester, for example," he said, "a city of 20,000 population, where 1,000 people have received allotments, and in many cases with almost magic results. The over-specialization of modern industry hurts both brain and body, and working in the soil is a singular corrective and regenerating force. I know dozens and dozens of artisans whose work was deteriorating, their employers tell me, until they got land. Now they are becoming new creatures altogether, and taking a new outlook on life. Then again, the men who succeed with one, two, or three acres frequently develop an appetite for more. In fact, I look to allotment holding as the first step to small holding and the starting-point in a genuinely practicable back-to-the-land programme."

The legislation for the conservation of child life has also been most notable. The shockingly high infant mortality prevalent in Great Britain, as elsewhere, has produced in England not merely indignation, but remedial action. The city of Huddersfield some years ago required early notification of births, and, as the result of providing better medical advice and attention for the poorer mothers, quickly reduced its infant death rate from

ONE OF THE LIBERAL POSTERS

SPREAD BROADCAST THROUGH ENGLAND BY THE LORD HIGH CHANCELLOR WHO KNOWS BY PERSONAL EXPERIENCE THE BITTERNESS OF POVERTY

138 to 85 per thousand. Such a lesson was not allowed to go unheeded, and Parliament promptly passed a general Notification of Births Act, under the provisions of which the municipal health officers, in cities embracing a large part of England's population, are required to furnish such attention and instruction as were given in the Huddersfield experiment. To the efficacy of this statute must be attributed, in very considerable measure, the astonishing re-

duction in infant mortality from 1901-1910. In England and Wales in the former year there were 151 infant deaths for each 1,000 births; and in the latter year only 106 — statistics more eloquent than words.

No less important is the law for compulsory medical inspection of all children entering or leaving school. In 1910, of the 2,000,000 boys and girls examined under this act 60,000 were discovered to have incipient tuberculosis, the disease being detected in most cases in time for proper treatment to insure the recovery of the patients, to say nothing of saving thousands of their schoolmates from infection; 200,000 were found to have defective eyesight, and 160,000 adenoids or enlarged tonsils. Think of detecting five thousand cases of tuberculosis a month, and discovering thirty thousand children a month — one thousand a day — to whom eyeglasses or a simple operation may mean the difference between failure and success. No wonder, when I had occasion to look up Mr. Percy Alden in the House of Commons the other day, I found him jubilant because the new Budget provides the $300,000 the first year and $500,000 the second year that he has been asking for, to assist local communities in providing medical clinics for the treatment of the diseased boys and girls.

"The Children's Act" of 1908 codified and improved all the existing legislation for the protection of children and is, perhaps, the greatest single act for the protection of child life ever passed by any government. Children are protected from drunken, criminal, or vagrant parents; juvenile courts are established; and stringent regulations forbid children from entering bar-rooms or buying cigarettes or tobacco for their own use.

But England's programme for social reform does not end here. "Do you know what is in front of you?" asked Mr. Lloyd-George in a speech I hurried out of London for the purpose of hearing. "A bigger task than democracy has ever undertaken in England. You have got to free the land — to free the land that is to this very hour shackled with the chains of feudalism." I happened to be a spectator in Parliament when Mr. Asquith gave the first official avowal that Mr. Lloyd-George's belief as to the necessity for the land reform was "shared by his colleagues."

"And do you think that the land is 'shackled with the chains of feudalism'?" a Conservative member demanded.

"I think that is a picturesque but not inaccurate description," was the Premier's reply.

England has cause indeed to be alarmed over the decline of her rural population. Thirty years ago every third inhabitant of England and Wales lived in the country; now practically four fifths of the people are in towns. In a single generation the population of the towns has increased from 17,000,000 to 28,000,000 — has almost doubled — while the rural population has not only not increased but has decreased from 8,300,000 to 7,900,000. The trouble is the big land holder. Seven acres out of every eight are cultivated by tenants; only one in eight by owners. Plainly, the only way to get the people back to the land is to get the land back to the people. A great deal has already been accomplished through the Small Holdings and Allotments Act, but this is only a beginning. Neither the Liberal nor the Conservative Party has yet definitely outlined its land policy, but one thing is certain: the big estate must go. The Unionist or Conservative Party will probably advocate some such plan as the Irish Land Purchase Act, whereby tenants were enabled to purchase small tracts by paying 3¾ per cent. a year for sixty-six years. At present the Liberal party seems more inclined to favor the compulsory purchase of big estates, these to be subdivided and rented to small holders, the title resting in the State. The end of primogeniture is probably also in sight. "It might seem like heresy for a man in my position to say it," said one Conservative member of Parliament to me, "but I regard the abolition of primogeniture as about the first step in land reform."

It is a stirring and notable record which English Liberalism has made in its six-year term of office. In some things it has probably gone too far in the direction of

socialism. But one wonders if there is not less danger in the daring that is willing to violate some ancient prejudices for the sake of the public good than in a timid conservatism which, as Mr. Winston Churchill says, "gets scared in discussing any proposal whenever some old woman comes along and says it is socialistic." It is quite possible, of course, that dissension over Home Rule, Welsh Disestablishment, and other issues apart from its main programme, may lead to Liberal losses in the next election—one never can predict what will happen in politics—but, in any case, a vitalizing principle has been injected into British affairs that will persist, whatever party is in power.

Certainly America has much to learn from what has been done in the mother country.

WOMEN

II

THE CITY AS A MOTHER

PENSIONING SCHOOL CHILDREN AND MOTHERS — TURNING SCHOOL HOUSES INTO DANCE HALLS CHAPERONED BY POLICE WOMEN

BY

MABEL POTTER DAGGETT

TO AN official window in one of the city departments of New York, a man came recently leading his little daughter. "I can't get work," he said bitterly. "This child can. They are hungry at home. May she have a permit?"

She was fourteen and met the other requirements of the law. So the city of New York gave her the desired legal document, the "working paper," as the children call it. The man and his daughter went out together, the little girl to join the great army of toilers, where the insistent sign of industry, "Girls Wanted — Boys Wanted," always swings in the wind; the father to swell the ranks of unemployed men.

With the increasing invention of machinery, the tasks found for little hands to do have multiplied. Automatically the doors that have opened inward to admit the children to the factories, have opened the other way for the men going out. Besides these, there are many employed workingmen who, with the rising cost of living, cannot earn enough to support their families. The Massachusetts Bureau of Statistics investigated 152 homes in which the fathers earned an average of $594 a year. It found that in 127 of these families this income was not sufficient to meet the expenses without the labor of minor children. Chapin, in his Standard of Living for New York City, finds that, even among families with an income of $900 a year, 22 per cent. are underfed.

So it is easy to see how last year 40,530 children in New York city went the way of that little girl past the official window, carrying their working papers with them. Throughout the United States there are some two million of these child bread-winners less than fifteen years of age.

There would be more but for the "child labor" laws that now bar the way, in some states at twelve years, in some at fourteen, and even, in special cases, up to sixteen and eighteen years and say to commerce and industry "You must let these children go!"

When the law set a limit to the age at which a child might begin to work, and the smallest ones came down from the

factories, shops, some of them went weeping on their way to freedom.

Their benefactors asked, why? "How now shall we get three meals a day?" the children said. Obviously it wouldn't be advantageous to send a child to school and starvation. So the states had to think over this problem. Some of them put the "poverty exemption" clause in their child labor law, permitting the under age child to work if he or his family are dependent on his labor. Other states, declaring that the remedy lies not in overworking the child, but in supporting the family, turn these cases over to the regular charitable agencies. But there are self-respecting families and self-supporting children who shrink from the system of enforced charity.

It was the women's clubs that found the ideal way. They came forward with the "scholarship plan," suggested by Mrs. Florence Kelley, of New York.

Elizabeth Eastman, who graduated last June from Public School No. 70, New York City, with the highest honors in her class, was a "scholarship child." She wouldn't have been but for the great trouble that had overwhelmed her home. Her father, a bookkeeper, had always maintained his wife and daughter and baby son in comfortable circumstances until he became violently insane from overwork. In their dire need, the mother, entirely unaccustomed to hard labor, became caretaker for an apartment house. The daughter, Elizabeth, at thirteen, went to work in the chocolate factory down the street. The truant officer caught her there employed illegally without a permit. "We will die before we will accept charity," the mother said fiercely as she folded the sobbing little girl in her arms. But when the New York Child Labor Committee offered a "scholarship," that sounded different. They paid for Elizabeth's time, putting her back in school, while her mother received regularly the $2.50 a week that had formerly come in Elizabeth's pay envelope. When she finished school a position was secured for her in a bookbindery, where she is now earning $9 a week. And the family has been lifted above the line of the "submerged."

It is the relief provided now in a number of cities for extreme cases, when it is proved definitely that the earnings of a child, prevented by law from work, are all that stand between his family and absolute privation. Chicago started this movement in 1903. New York, Philadelphia, Pittsburg, St. Louis, Baltimore, Minneapolis, Grand Rapids, Toledo, Los Angeles, and Louisville are others that adopted the plan.

In all these instances, however, the money for the scholarship is subscribed from private sources and, however disguised by an attractive name, is fundamentally philanthropy. In Switzerland, from which country Mrs. Kelley brought the idea to America, it is the Government of the Canton itself that underwrites the scholarship. In Zurich, every widow's child of school age takes his money home to his mother at the end of a successful week in school. She has not even had to ask for it. The law-makers of Switzerland pay it to her as her right, because they deem it to the advantage of the State that her child shall be in a school room rather than a factory. In the United States, we are at last beginning to see it this way. Ohio, Oklahoma, and Michigan are now paying from public money the funds required to secure the attendance at school of the necessitous child. In Ohio and Michigan, it is significant that the money comes from the regular school sources. It is provided on a par with the free text books that for some years have accompanied the free education in many cities. Free education itself only ceased to be considered charity about a hundred years ago.

The scholarship aid is simply a community investment. Schooling is a means of prevention for dependency and delinquency. In the Chicago Juvenile Court, of 100 delinquent boys, 65 of whom were past 14, only one had finished the eighth grade, only 11 had finished the sixth grade, and 60 of them were physically considerably below normal. It is a record that is deemed representative for the 2,500 boys brought before the court in a year. Everybody has always known that prevention was better than cure. Now

it is discovered that it is also cheaper than cure. With all the tremendous expense of reform schools and other penal institutions charged up where it belongs, we are coming to see that child labor, purchased so cheaply by the manufacturer, is more than paid for by the public in reform schools, in charity, and in the cost of crime.

ABSENTEE MOTHERS

Recently, as we have been checking up social costs, another waste in social management has appeared. It is in the motherhood that is allowed to spend itself over the wash tub and in scrubbing the beautiful marble staircases of Fifth Avenue and other avenue buildings. For sometimes, working eighteen hours a day that way, it wears out altogether. Then a woman, broken in health, with a family of children, or perhaps the whole brood now motherless, is listed with the charity agencies. It was Indianapolis, Ind., that four years ago first took definite steps to turn this motherhood force to better account. They said there that only superhuman ability could compass unaided the two tasks of motherhood and wage-earning at the same time. Only the crudest sort of social state would exact it of any woman. So they built, in the suburbs of the city Fairview Settlement, a collection of pretty little cement houses, where the Charity Organization Society places widows with children to support. Each home is rent free to the family that occupies it, and there is also provided a free nursery and kindergarten.

More recently, another plan has been discovered that quite cuts the connection with charity. Two states, Missouri and Illinois, in 1911, put motherhood regularly on the pay roll. The court awards what is called a pension, to any mother of good character who needs such assistance properly to bring up her children. Hitherto, it has been the custom, when a home failed in the struggle for existence, for the court to place such children in an institution. This new revelation of sociology, however, says that a child's mother, if she is the right sort of woman, is God's own institution for its upbringing. And it pays the State much better in the long run to have her engage in the business of child culture than in washing and scrubbing. So now they propose to hire her for it in her own home, instead of hiring uniformed caretakers in brick-built institutions. For one thing, she does the work cheaper, at a cost merely of rent, groceries, clothing, etc., not charging at all for her labor, though she will, for instance, stand more hours at her sick child's bedside than any other human being could be hired to do.

The Cook County Juvenile Court, in the city of Chicago last summer, had some 327 mothers with an aggregate of 1,200 children cared for on this plan. It is costing the community an average of $5.75 per month per child, as against $10 per month per child under the old institutional plan. It will cost the state of Illinois this year about $100,000. Eventually, when enough mothers have learned about it, that figure, it is expected, will rise to $200,000. The state authorities have said that they don't care if it goes to $500,000. The contract with the mothers will be cheap at that. For it is counted on to diminish the bill for crime that is now costing Cook County alone $6,000,000 a year.

Working mothers and the consequent lack of care is what has sent many of the city children on the way toward failure in life. The child that doesn't have enough of his mother is likely to get that way. The institutional child, separated entirely from her, is more than likely to. Statistics from the Elmira Reformatory in New York State show that 60 per cent. of the inmates were brought up in institutions. Of four young men at the age of eighteen hanged in Cook County, Ill., early in 1912, all had been raised in charitable or reformatory institutions. The motherhood pension way is to form children by home raising so that they will not have to be reformed.

A CAMPAIGN FOR MOTHERS' PENSIONS

A campaign to put this system in operation in every state of the union is being promoted by Mr. Henry Neil of Chicago, secretary of the National Probation League, and now widely known as "the father of

the mothers' pension law." Massachusetts and Ohio have commissions investigating the pension plan, and Michigan is considering it. Colorado is to vote on it this month. In California the courts are sometimes "boarding out" children with their own parents. In Wisconsin, the city of Milwaukee, to prevent the separation of mothers and children, may grant allowances to widows through the juvenile court.

In New York State, the motherhood pensions have been urged for a long time by Mrs. William Einstein, president of the Widowed Mothers' Fund Association of New York City, a private organization that has been attempting to do for a limited number of mothers what the city of Chicago now does freely for any mother who needs it. There came to the Widowed Mothers' Association recently a weeping woman, whose case had been attended to by New York's public charity system in the usual way. She had applied for assistance in the support of her three children. The city had said "Yes," and had taken the children and placed them to board at public expense in a private home. They were 'way out in the Bronx, and the mother lived down on the East Side. She came to the Association to ask for a loan of money that would enable her to move to the Bronx and rent a flat in the same house where the city was keeping her children.

Mrs. Einstein told that story to the Charities Committee of the New York Commission on Congestion of Population. "Now gentlemen," she said, "that was a stupid arrangement to place those children to board with another woman. Don't you see that New York City might better board them with their own mother?"

And the Commission on Congestion did see. They have endorsed the motherhood pension plan. And it is to be presented in a bill that will be brought before the New York legislature this winter. Similarly, the question will sooner or later come before the legislature of every other state. The General Federation of Women's Clubs, in session last July, endorsed Mr. Neil's movement, which is now nation-wide. And everywhere that the new child-caring plan is presented, its advocates specifically urge that there is no charity about it. The pension is but payment on the part of a grateful country for service rendered by a woman who has given the state certain future citizens whom she, better than any one else, is fitted to bring up to an efficient manhood and womanhood.

SCHOOL HEALTH-INSPECTION

It is to improve the quality of citizenship that the city is gradually extending its protectorate over childhood. Even with the child labor laws and the compulsory education laws in effect, the great free public school system does not do its full duty. A great many children have to repeat their classes. Every time this happens it means that the city pays over again for a term of schooling that has failed. The attempt to put education into physically defective children is not a paying venture. The school doctor and the school nurse have been summoned to put the children in condition for the school teacher.

Boston, in 1894, was the first city to establish regular medical supervision of the schools. By 1902, twenty-three cities had adopted the plan. In 1911, so rapidly had the idea spread that 443 cities throughout the United States had hired the school doctor, one quarter of these had the school nurse to assist him, and sixty-nine had also added dental inspection by dentists.

In New York City, which has probably the most complete system of medical supervision, the doctor and the nurse visit the school every day. The greatest difficulty was experienced in securing free dental treatment, and paid treatment is absolutely beyond the means of thousands of families. Miss Marjorie Clark, one of the city nurses, finally secured through private subscription the establishment of the Free Dental Clinic for New York School Children at 449 E. 121st Street, of which she is now the superintendent. It is expected that the city will, during the ensuing year, take this clinic over and finance it as one of the

municipal activities. Newark, N. J., is regularly granting an appropriation from the public funds to meet the expenses of the dental clinic for the schools originally started there by the women's clubs.

FOOD FOR BODY AS WELL AS MIND

But sometimes neither medicine nor dentistry will cure what is the matter with the backward child. There are cases where the examining physician finds it necessary to prescribe food. To nine "anemic classes" in the New York schools, the Tuberculosis Committee of the Charity Organization Society supplies a school lunch, in the effort to prove their contention that better nourished children make brighter pupils. In Boston, Miss Isabel Hyams, one of the trustes of the Tuberculosis Hospital there, suggested that the best means by which to control tuberculosis would be to feed anemic school children. And she induced the Winthrop School to try it. Fifty children most in need were selected. They were served with penny lunches by the girls of the domestic science class, who did the work as a part of their school routine. The plan proved so successful that it was extended. In 1910, about 2,000 children in Boston were being fed in this way without a deficit in the school treasury.

The Health Department, having found medical inspection good in the school, is now extending it to the cradle. The municipal nurse in some cities is being sent to the home. In Boston and in Rochester, N. Y., she arrives even before the baby with instruction for any expectant mother who applies for aid. In New York, the doctors and the nurses who serve in the schools are in the vacation season detailed to the tenements. All summer the nurses climb the long flights of stairs in the crowded quarter. They stop at the open doors on every landing to talk to those women who have always a child in their arms and more tugging at their skirts. The mothers are invited to the nearest "health clinic," of which there are some sixty throughout the city, where a doctor twice a week weighs the babies and advises about their care.

There are problems that the individual family is no longer able to cope with alone. They have arisen particularly in the cities, where as many people now live closey together in a single block as once populated a village. When the father's earnings fail to support the home and the mother too must become a wage earner the younger children at play in the streets get into mischief. The older children, with their working papers in their hands, carry the passport to freedom from home constraint that economic independence assures. One sociologist has told the story of the sixteen year old girl who, in a dance hall of dangerous repute, tossed her head in defiance of the threat of parental objection. "I pay the rent," she said, "What can my mother do to me?"

So the city came to the aid of the home in another way to assist in the upbringing of boys and girls. The Department of Recreation now ranks with the Department of Health and the Department of Education. The movement has been a growth of the last twenty years. In most cities, it was the women's organizations that started it. At first a public playground was usually a vacant lot that the local mothers' club had induced some public spirited citizen to permit the boys of the neighborhood to use, while the club members hired an undergraduate college student to keep order. From these pioneer efforts it was a far dream to the present splendid playfields, with expensive equipment and managed by a play director as specifically trained for his work as the teacher or the doctor for his. The first city to take over the administration of playgrounds was Philadelphia in 1895. In 1912, there were 257 cities in the United States maintaining playgrounds. Within the last decade $60,000,000 has been expended by various municipalities in extending this work. New York has spent $16,000,000 and Chicago $11,000,000. Cincinnati in 1910 voted a bond issue of $1,000,000 for parks and playgrounds. Pittsburg voted $800,000 for the extension of playgrounds and $200,000 for their maintenance. Among the smaller cities, Grand Rapids, Mich., appropriated $200,000 and Covington, Ky., $100,000 for play purposes.

There are juvenile court records that show the value of this investment. Playgrounds were located in the stock yards district of Chicago five years ago. Since then, according to figures furnished by Prof. Allen T. Burns of the Sage Foundation, boyish crime has been reduced an amount that averages 44 per cent. for the whole district—a reduction that is 70 per cent. for the neighborhoods in the immediate vicinity of a playground and 28 per cent. in the regions farthest outlying from it. Cincinnati in 1906 had 1,460 delinquent children brought to the bar of the juvenile court. In 1909, when play grounds had been established just two years and a half, the number of child delinquents had been diminished to 993. Rochester found that, when a social centre was fully in operation, the neighborhood juvenile court record dropped 50 per cent.

THE SOCIAL CENTRE

Play facilities are no longer limited to the sand pile and the swing and the ball field. The vast sums the cities are spending cover a much wider range of recreational activity. The social centre has been added to the playground, and young and old of the neighborhood have been invited in. It was the settlements that first saw the need. In those city districts that are populated 700 and 1,000 people to the acre, the front parlor has of course utterly vanished from family experience. It is the lost appendage of an older social order. Courtship, however, goes on forever. And sweethearts with no facilities for lovemaking at home must find them elsewhere. The girl of the tenements and her "young man" — millions of them — when the whistle blows that ends the long day of toil, turn with the yearning heart of youth to the night for joy. The cheap theatre flares out in brilliant electric light, the dance hall piano strikes up a lilting strain, and the saloon with the "sitting room" sign beams a welcome. The settlement was the counter influence to these attractions. The social centre to-day is the settlement under city direction.

Chicago leads all other cities in this public provision for recreation. The beautiful "field houses," located in the great parks there, are the neighborhood club houses that are the meeting places for the people. In the assembly halls the young people hold their dancing parties, there are rooms for their club meetings, reading rooms, refectories, gymnasiums, and swimming pools within doors, while outside are the vast playgrounds with skating ponds, athletic fields, running tracks, and ball fields. Philadelphia in 1911 dedicated Starr Garden, its first neighborhood club house, and planned for three more. There are other cities that, without investing in new buildings, are making use of the school houses as evening recreation centres. Rochester has been most successful in this school extension. Boston last year opened its first public school social centre. New York has used its school buildings for this purpose since 1902. The attractions offered there have been literary club meetings, gymnastics, and athletics for the boys, and folk dancing for the girls.

Very recently the programme has been enlarged by an innovation that was at first adopted with some caution. In all the movement to provide social opportunities, one fact has stood out clearly: There is no other form of recreation that appeals to youth like the dance. All over the country within the last few years, the dance halls have opened to meet the demand. Chicago has 250, New York has more than 500. That the municipality must give the working girl a decent place to dance has been determined by the New York Committee on Amusement Resources for Working Girls, of which Mrs. Charles H. Israels, a secretary of the Playground Association of America, is chairman. Through this committee's influence, mixed dancing has been for the last two years permitted in six of the New York recreation centres. When, one night, Supervisor Edward W. Stitt, visiting a school house, found 150 boys and girls enjoying themselves in wholesome waltzing, while the notorious dance hall across the way had only thirty dancers on the floor, the new function of the public school seemed to have vindicated itself. During last summer, every Friday evening, from 500 to 700 young people danced in the

open court yard of School No. 63, just off from First Avenue. This winter, it is planned to make neighborhood dancing a feature at several more of the recreation centres.

Cleveland has inaugurated a municipal dance hall with regular paid admission. At this dancing pavilion, opened at Edgewater Park last August, with three cents a dance charged, the first night's receipts were enough to pay the expenses for a week. The enthusiastic promoters immediately planned to convert the pavilions of all the city parks into municipal dance halls. And Dance Inspector Robert V. Bartholomew started a campaign to permit dancing in the public school buildings themselves.

THE DANCE HALL CHAPERONE

To a Chicago settlement worker who protested with a packing house girl against going to a certain beer garden, the girl, who had spent the week labelling several thousand cans of meat, made reply: "I'm that tired when Saturday night comes I don't care a damn where I go."

The girl like that, who has been speeded up by industry until she recklessly "does not care," is a social menace for which a city pays. It is really for her chaperonage that the police woman has arrived. There are at least six cities in the United States with regular police women. Before this statement can get into print, there will be more. Representatives from thirty women's clubs in San Francisco the other day called at the office of the police commissioner there to ask for the appointment not of one but of twenty-one police women. Forty other California cities are also demanding them. Baltimore, the first city in the East to adopt the innovation, was empowered by the last legislature to employ a police woman.

In Seattle, which has just appointed five police women at a salary of $85 a month apiece, they are patrol women who cover definite beats. Elsewhere, however, they are usually detailed to theatres, skating rinks, dance halls, city parks, and amusement places in general. They wear no helmet and brass buttons, and carry no club. Their work is preventive rather than punitive, though when occasion demands, they make arrests as does the policeman. In personal characteristics, they may be said to differ very greatly from the usual conception of that public official who maintains law and order in the city streets. The police woman is a sociologist. She relies on a cultivated brain rather than on muscular brawn to cope with the tasks that she meets. For example, Mrs. Alice Stebbins Wells, appointed to the police force of Los Angeles in September, 1910, had her training in the New England Theological Seminary. She was assistant pastor of Plymouth Church, Brooklyn, and later for two years pastor of a church in Oklahoma. When, in Los Angeles, she decided to ask for the appointment as police woman so that she "could do things instead of talking about them," all the churches of the city backed her request.

The women find their special field in the rescue work for girls. In Minneapolis, the police woman's position was created on the recommendation of the Grand Jury and the vice commission, who urged that there should be a woman officer to look after the young girls on the streets at night, in the dance halls and cafés. Miss Emilie L. Glorieux was appointed.

So the municipality is enlisting women for numerous activities formerly reserved for men. Three large cities — Chicago, Cleveland, and Denver — have within as many years entrusted their school systems to women superintendents. New York City's Division of Child Hygiene of the Department of Health is in charge of a woman, Dr. Josephine Baker. And the Children's Bureau at Washington, to be the clearing house for information on which to base all public work in behalf of the American child, has been placed under the direction of Miss Julia C. Lathrop, the first woman to head a government department.

It appears that in the care of the child as in other industries that have gone out from the home, women have again followed their work. And demanding that the city must give to every home education, health, and happiness, they are writing large the twentieth century's Declaration of Children's Rights.

THE MARCH OF THE CITIES

OKLAHOMA CITY AND ITS LOW PRICED MARKETS

OKLAHOMA City, which hardly existed in 1890, had 10,000 population in 1900, and has 72,000 inhabitants now. So intent were its citizens upon building a city that they overlooked the question of developing the adjacent country, and as a result, food prices had increased in Oklahoma City, up to the spring of 1912, almost as rapidly as the population had increased. Then the Chamber of Commerce brought a bright young man, Mr. W. B. Moore, from Dayton, O., to fill the post of Secretary-Manager of this organization of city "boosters," and young Mr. Moore called attention to a few things that had theretofore been overlooked in the development of the town.

"There's plenty of food being raised all around this part of Oklahoma," said Mr. Moore, "but the farmers haven't any way of selling it to our people and the city people haven't any way of buying it from the farmers. What this town needs worse than anything else is a public market, and there's no use waiting to issue bonds and put up a market house — let's set a couple of blocks of California Street aside as a market place and send out word to the farmers to come in and sell their produce."

It took Oklahoma City about as long to act on Mr. Moore's suggestion as it took him to offer it. The market was opened on Saturday, May 21, 1912. Eighty farmers backed their wagons up to the curb on that day and several hundred thrifty city housekeepers quickly bought all the produce offered for sale, at prices far below what they had been accustomed to pay; the farmers, nevertheless, getting higher prices than they had previously obtained.

On the next market day there were more wagons and more buyers. It became the fashion in Oklahoma City to buy food supplies direct from the producers. All kinds and conditions of women came to the markets. Electric coupés filled with market baskets are familiar on California Street on market day, as are the many women who carry their own provisions home. By mid-August three squares on California Street were being occupied by the market, and more than three hundred farmers were selling produce every market day.

The success of the market idea having been fully demonstrated, the farmers and truck gardeners formed an association and leased a large building, 75 feet wide and 200 feet deep, which has been converted into a market house with more than two hundred stalls, where not only the farmers, but dealers in meat and fish and bakery products, are brought into direct contact with consumers.

Actual figures, comparing the retail cost of all kinds of food supplies in Oklahoma City with those of a year ago, show decreases ranging from 25 to 50 per cent; nor is this the only benefit the city has obtained through the establishment of the market, for the facilities for the sale of farm and garden produce has greatly stimulated agricultural settlement in the vicinity. Since the market was established more than twenty-five families have taken up small tracts adjoining the city for truck gardening, and hundreds of inquiries from others who wished to take advantage of the market have been received by the Chamber of Commerce. The truck growers of the county have organized a coöperative shipping association, and this, with a produce shippers' association, organized by Oklahoma City commission merchants, will enable the surplus produce not absorbed by the local market to be sent to other consuming points at the minimum of expense.

Oklahoma City has thus found the solution of two of the most vital problems that confront American municipalities — the high cost of living and the development of agricultural territory adjacent to the city — to be simple when intelligently approached.

FORWARD TO THE LAND

THE LAND IS CALLING

By E. H. GRUBB

PROVOKED by a little article that I had in this magazine two months ago, a man in California wrote to ask if I knew of a capable farmer to put to superintending his many acres. He was willing to pay a good salary.

I know a wealthy banker and land-owner in Colorado who has placed his capital and his land at an equal value with the brains of a professor of animal husbandry. They have gone into partnership to grow farm crops, and breed and fatten cattle. The young professor's half of the business is worth $25,000 a year and independence.

There are many more cases of this kind.

There is untold opportunity on the land for capital and for brains and it ought to be well supplied with both. There is more opportunity now than ever before because we are only really just beginning an era of discovery and development. The president of the Rock Island Railroad says that the work of Professor Holden, the corn expert of the Iowa Agricultural College, is worth twenty million dollars a year to Iowa alone.

Yet such work is new. It is just begun. Secretary Wilson told me that, when he took charge of that college thirty or forty years ago, he could wheel all the text books there were in one wheel-barrow load, and in the college there was but one student of agriculture. We have improved since then. The agricultural schools were then the subject of ridicule. The professors were supposed to teach everything pertaining to crop production, soil conditions, culture, and chemistry, coupled with a knowledge of all the different breeds of live stock, dairying, poultry-breeding, and many other things. In the short period of forty years we have progressed so that we now have professors of soil work, professors of dairying, etc. And the professors are laughed at no longer. They are eagerly sought for.

Yet, although they have established scientific agriculture beyond the attack of the jesters, they have only made a beginning. There was more knowledge of real farming in practice in France two hundred years ago than there is here today. Take Colorado for example. There are no silos. The manure that is saved is windblown and sunbaked — wasted. The same kind of ignorance is all over the country. The railroads will pay a man almost anything who will teach the farmers better. The states will give him honor and position, as Iowa has given Professor Holden. The land will make him rich and independent if he will put his knowledge into practice. There are thousands of opportunities for profitable investigation entirely untouched. For example, the Spitzenburg is one of the highest priced apples on the market. It is also one of the least prolific. The requirements of soil and plant food that would make it more prolific are not known. But a student of its peculiarities could learn to feed this tree to make it bear profusely. Such study pays. The land is calling for men of brains and it will pay them well.

ANSWERS TO QUESTIONS ABOUT FARM LANDS

51.— *Q.* I would like to learn about land and farming conditions in the "Uplands of Arkansas" in Yell and Perry counties, where, I understand, land is offered at very low prices by some lumber company.

A. You probably refer to the 35,000 acres being sold in 40-acre tracts at $15 per acre at Ola, Ark. This is rough country of high table lands, mountains, and valleys, ranging in elevation from 700 to 1,200 feet. Only trees over ten inches in diameter have been removed; hence in addition to brush and stumps there is still considerable pine, oak, and hickory timber standing. Its value for building purposes and

fuel reduces the average cost of clearing and fitting the land to less than $15 per acre (exclusive of removing the larger stumps).

The strong loam soil has been enriched by forest mold. There is a good deal of surface stone but conditions are in general excellent for the growing of corn, cotton, forage crops, vegetables and fruits — small and large. The climate is healthful and pleasant and the rainfall wholly adequate.

There is good local demand for all farm products, and larger markets can be reached over the Rock Island Lines. On newly cleared land, peanuts for hog pasture are good preparation for later cropping. Dairying and poultry raising open good opportunities. Of course the type of farming must be chosen with reference to topography, elevation, local soil conditions, etc

The country is undeveloped and life there must naturally be more or less pioneering for a few years. But the selling company is apparently coöperating with and assisting settlers in many ways to hasten successful development. The proposition is worth at least a trip of inspection and serious consideration.

52.— *Q.* Can you give me an idea as to (*a*) the cost per acre, (*b*) the fertility of the soil, of farms of about 200 acres in eastern Massachusetts, suitable for dairying? (2) Are the social and educational advantages and the highways good?

A. (*a*) Considering the buildings and other improvements often found on such farms, the nearness of markets, etc., prices are extremely low. Of a number of farms for sale in Worcester County, ranging in size from 150 to 220 acres, and all less than three miles from a railroad, the average price was $31 per acre. (*b*) In some cases the soil is liable to be run down but rarely, if ever, is it worthless. It has, however, the characteristic diversity of all New England glacial formations, loam, sand, clay, and muck often being found on the same farm. Accumulations of surface stone and gravel are common. But all the soil is rich in mineral matter and with care can be made highly productive. (2) The County has not only excellent high and elementary schools, but also several colleges and a number of agricultural schools. Its proximity to Boston promotes social development and there are five agricultural fair associations and many granges. There are some typical country roads, but the majority are of the type that has placed Massachusetts at the top as a "good roads" state.

53.— *Q.* (*a*) What must I expect to pay for five acres of land for English walnut growing in Southern California? (*b*) Where can I get information about raising the nuts there and (*c*) is there a Walnut Growers' Association in the state?

A. This crop demands a highly favored locality, a deep, rich soil, and a climate free from extremes. Land embodying these conditions is limited and therefore high priced. A bearing orchard may bring $2,000 an acre; acreage suitable for development will cost from $250 per acre upwards. (*b*) You can get information about raising walnuts from Professors C. A. Reed and E. R. Lake of the Bureau of Plant Industry, Department of Agriculture, Washington, D. C., and the California Agricultural Experiment Station, Berkeley, California. (*c*). There are a number of local walnut growers' associations, a list of which you can obtain from the Experiment Station or the California State Agricultural Society, Sacramento, Cal.

54.— *Q.* When will the land on the Government irrigation project at Elephant Butte, N. M. be open for settlement, what kind of farming is it good for, and how can it be acquired?

A. All unentered Government land on the Rio Grande Project near Elephant Butte has been withdrawn from entry, pending the completion of the storage works, which will take five or six years. Until the cost of the entire work is known the price of water rights cannot be determined, therefore it cannot be said when the land will be available for homestead entry. Any acreage now irrigated is under private ownership. Possibly some is for sale. Conditions are suitable for alfalfa, grain, vegetable, and fruit growing.

55.— *Q.* I have just bought a farm on which are 200 bearing apple trees. I propose to set several acres of new trees. The expenses of caring for the former will naturally be "running expenses." But should I charge the same work on the new trees before they come to a bearing age to capital or to running expenses to be taken from the profits from the old trees?

A. Until an orchard is of bearing age all expenses upon it should be listed as investment and charged to capital — or, if you prefer, to an "improvement fund." This will avoid unfair charges against the old trees and permit new blocks of different ages, as they become productive, to pay their proportionate shares of the expenses.

The World's Work

WALTER H. PAGE, EDITOR

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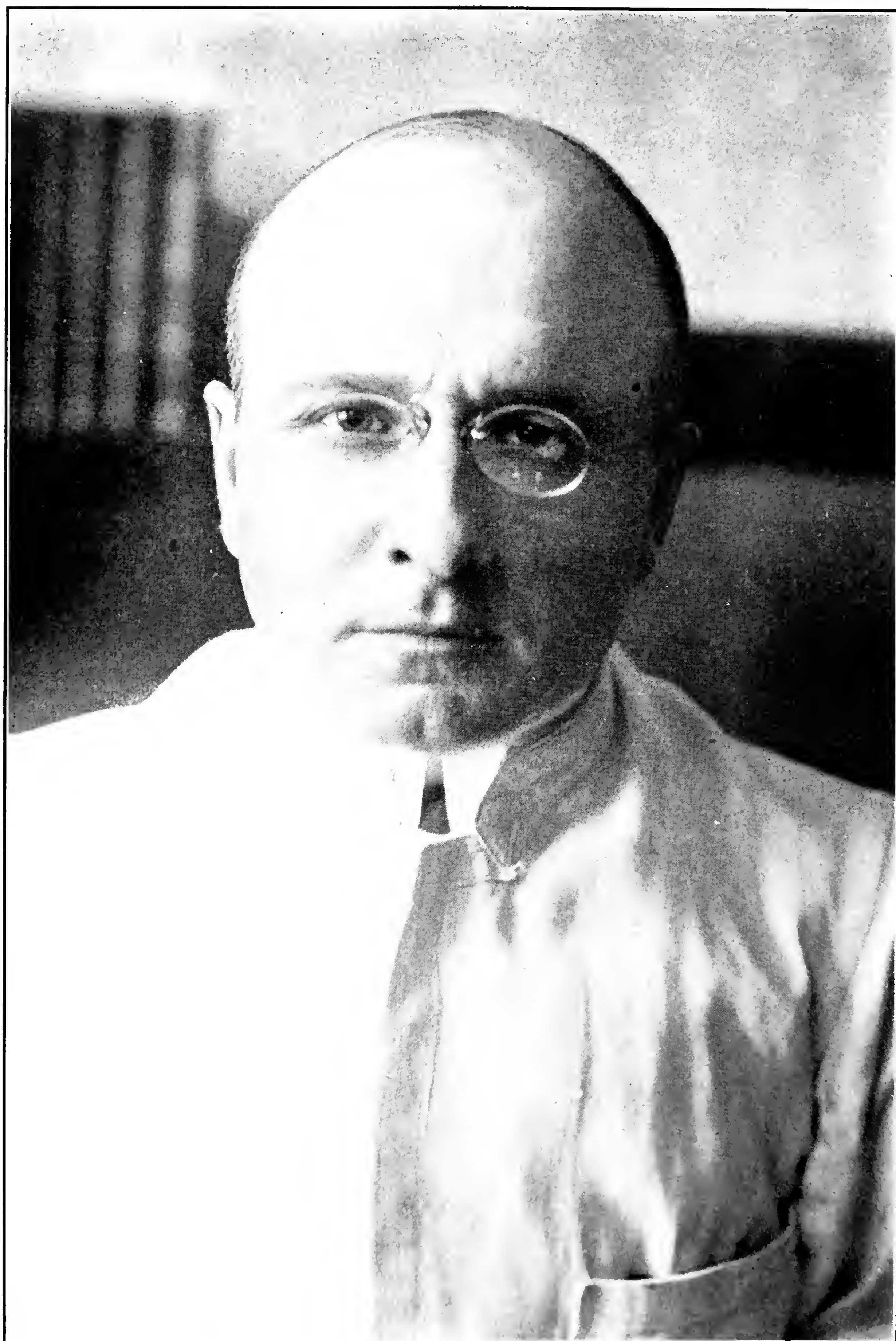

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DR. ALEXIS CARREL

WHOSE ASTOUNDING DEMONSTRATION THAT ANIMAL TISSUES, EVEN SOME OF THE VITAL ORGANS, CAN BE KEPT ALIVE INDEFINITELY AFTER THEY HAVE BEEN REMOVED FROM THE BODY, RECENTLY BROUGHT HIM THE NOBEL PRIZE FOR THE MOST USEFUL ADVANCE IN MEDICINE MADE IN 1911

THE

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DECEMBER, 1912

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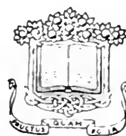
NUMBER 2



THE MARCH OF EVENTS

THE United States has entered a new economic era, and profound changes are coming in the qualities and the character of the people. Our exports are no longer chiefly food products: we shall soon consume all the food that we produce. We are at the end of our pioneer period when we could wastefully exploit our land and our forests and our minerals: we are beginning to see the necessity to conserve them.

We give expression to this change by our conservation organizations, by our rapid improvement in farming, by our attention to intensive rather than extensive work in every department of activity. We shall some day cease to export raw materials to come back to us multiplied in value by the skilled work of European craftsmen. This change of mood finds expression in what we call "scientific efficiency": the old slapdash methods no longer serve. It finds expression in the revolutionary changes in school work, to make training prepare for after-life. Of course it expresses itself in the rise in the value of farm-lands, and it is beginning to express itself by many voices in the demand for the improvement of country life. The cultivation of the soil is coming back toward its normal place among the great callings, in profit and in dignity.

All these things are part and parcel of the new economic era — its signs and precursors; and they show a profound change that is already taking place in American life and thought and method. We shall still have rich men; but fewer very great fortunes will henceforth be built up than were made by exploiting the raw materials of a new continent. So, too, in industrial development. We shall hardly have another era of swiftly made and inflated combinations.

This great economic change which is the beginning of a new era in American history finds expression also in our political thought; and we have the promise of work toward the unshackling of enterprise and opportunity by the removal of the special privilege that grew up with the exploitation of our raw materials.

Greater skill in work, better training, better working conditions for a more healthful body of workers, the coming of country life into its old-time profit and dignity and charm, the end of great exploitations, the better diffusion of wealth and of power: these are the signs of a new day and of new conditions of life.

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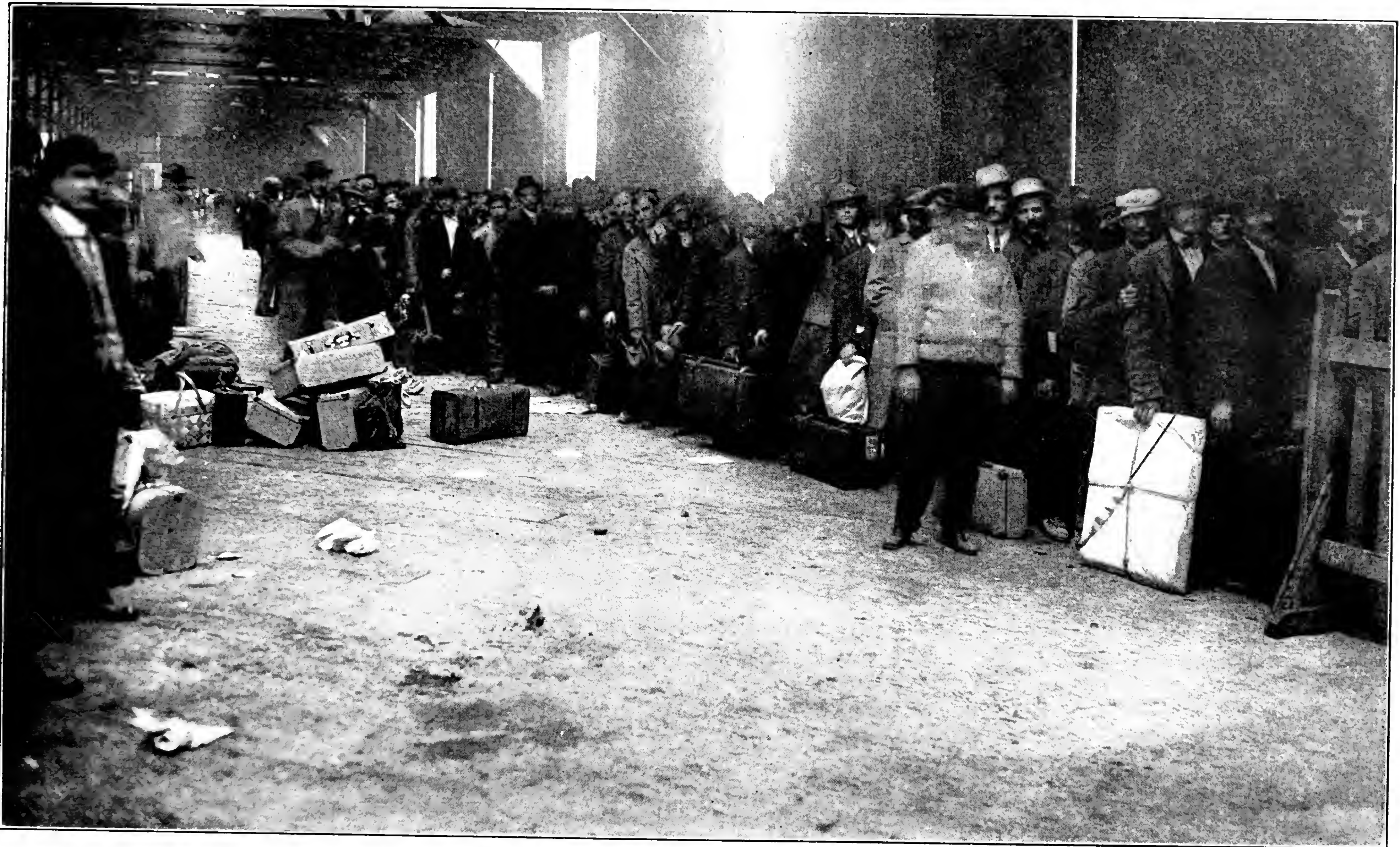
THE NEW "FIRST LADY OF THE LAND"

MRS. WOODROW WILSON, WHO, AFTER THE 4TH OF NEXT MARCH, WILL BE THE MISTRESS OF THE WHITE HOUSE

FERDINAND I., KING OF THE BULGARIANS

AND PRINCIPAL LEADER IN THE LEAGUE OF BALKAN STATES IN THE WAR AGAINST TURKEY

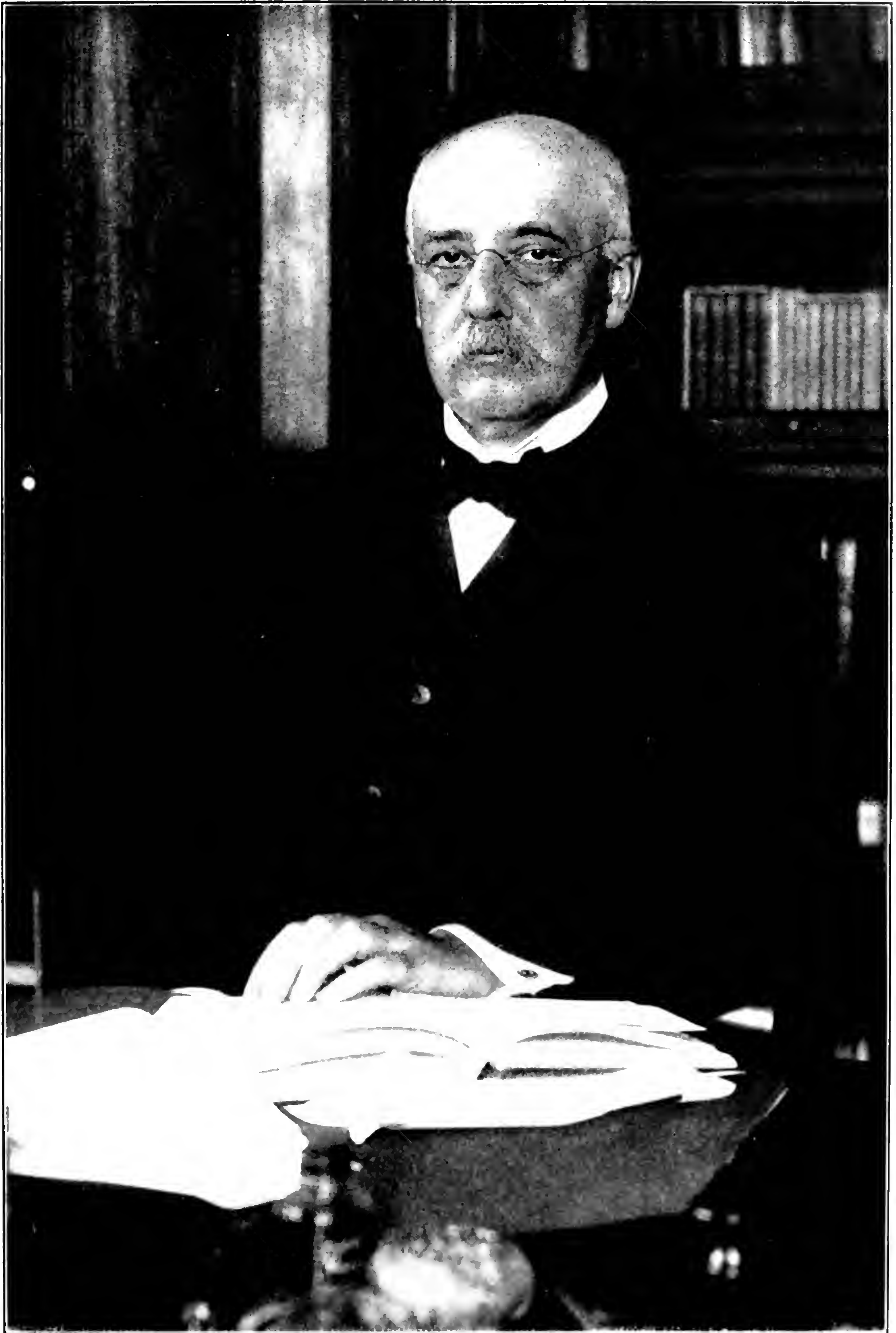
[See "The March of Events"]



AMERICANIZED GREEKS OFF TO THE WAR

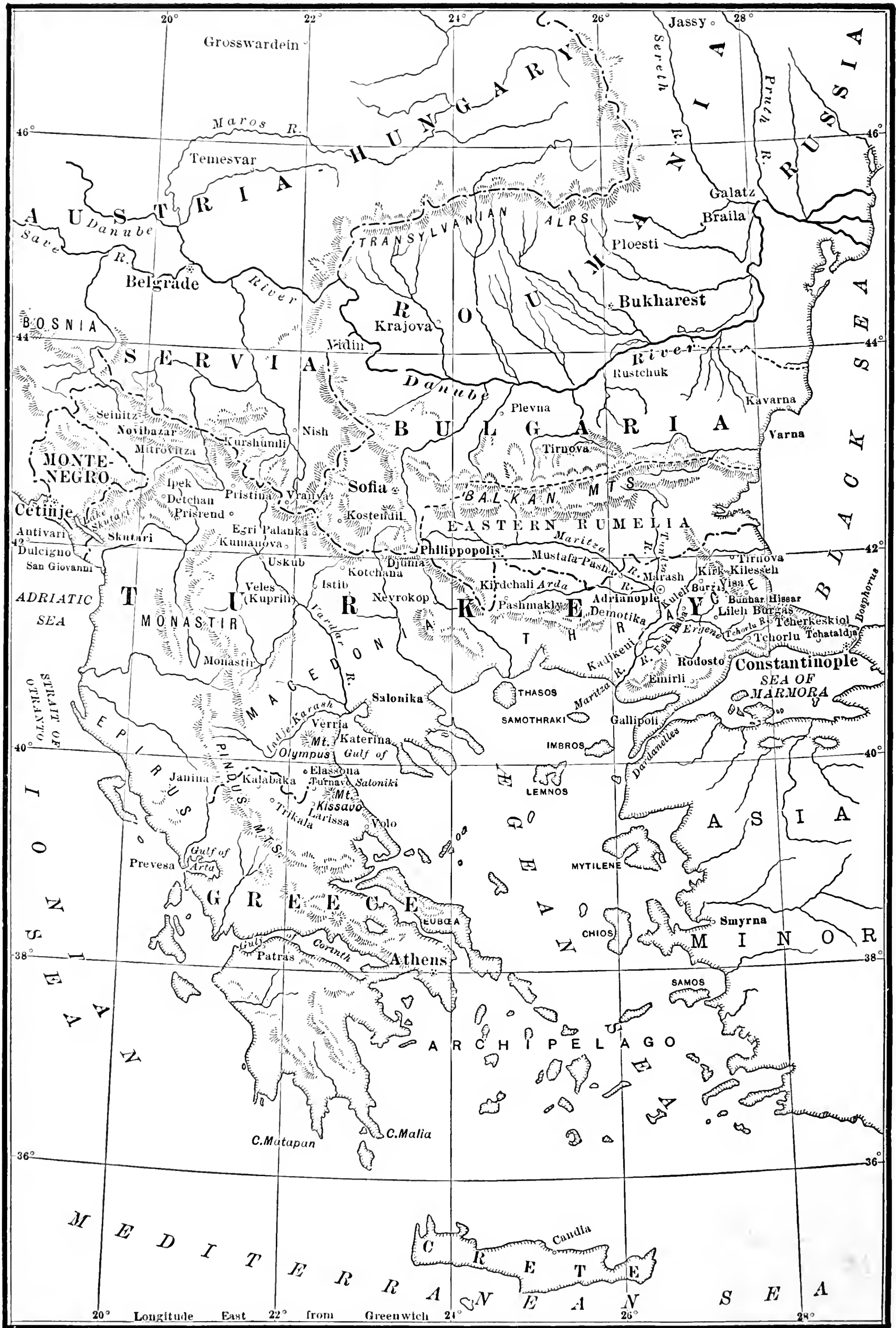
A TYPICAL SCENE IN NEW YORK DURING OCTOBER WHEN, IN FIFTEEN DAYS, 11,000 GREEKS, FROM ALL PARTS OF THE UNITED STATES, SAILED FOR HOME TO ENLIST IN THE WAR AGAINST TURKEY

[See "The March of Events"]



MR. WILLIAM H. MAXWELL

WHO RECENTLY COMPLETED HIS TWENTY-FIFTH YEAR OF SERVICE AS SUPERINTENDENT OF SCHOOLS OF THE CITY OF NEW YORK



THE SCENE OF THE BALKAN WAR

THE TWO VITAL POINTS IN THE SETTLEMENT ARE THE CONTROL OF THE MACEDONIAN SEA-COAST ON THE ADRIATIC AND THE CONTROL OF THE ENTRANCE TO THE BLACK SEA

THE HON. MOSES E. CLAPP

THE CHAIRMAN OF THE SENATE COMMITTEE WHICH HAS DONE AN INESTIMABLE PUBLIC SERVICE IN ENDING, BY THE FORCE OF PUBLICITY, THE CORRUPTING INFLUENCE OF CORPORATION DONATIONS TO NATIONAL CAMPAIGN FUNDS

PROF. T. J. J. SEE

WHOSE REMARKABLY SUGGESTIVE THEORIES OF THE EVOLUTION OF OTHER WORLDS PLACE HIM AMONG THE FOREMOST LEADERS IN THE DEVELOPMENT OF THE NEW ASTRONOMY

[See page 166]

PROF. GEORGE ELLERY HALE

DIRECTOR OF THE SOLAR OBSERVATORY OF THE CARNEGIE INSTITUTION OF WASHINGTON AT MT. WILSON, CAL., INVENTOR OF THE SPECTROHELIOGRAPH, AND PERHAPS THE MOST DISTINGUISHED STUDENT OF THE PHENOMENA OF THE SUN

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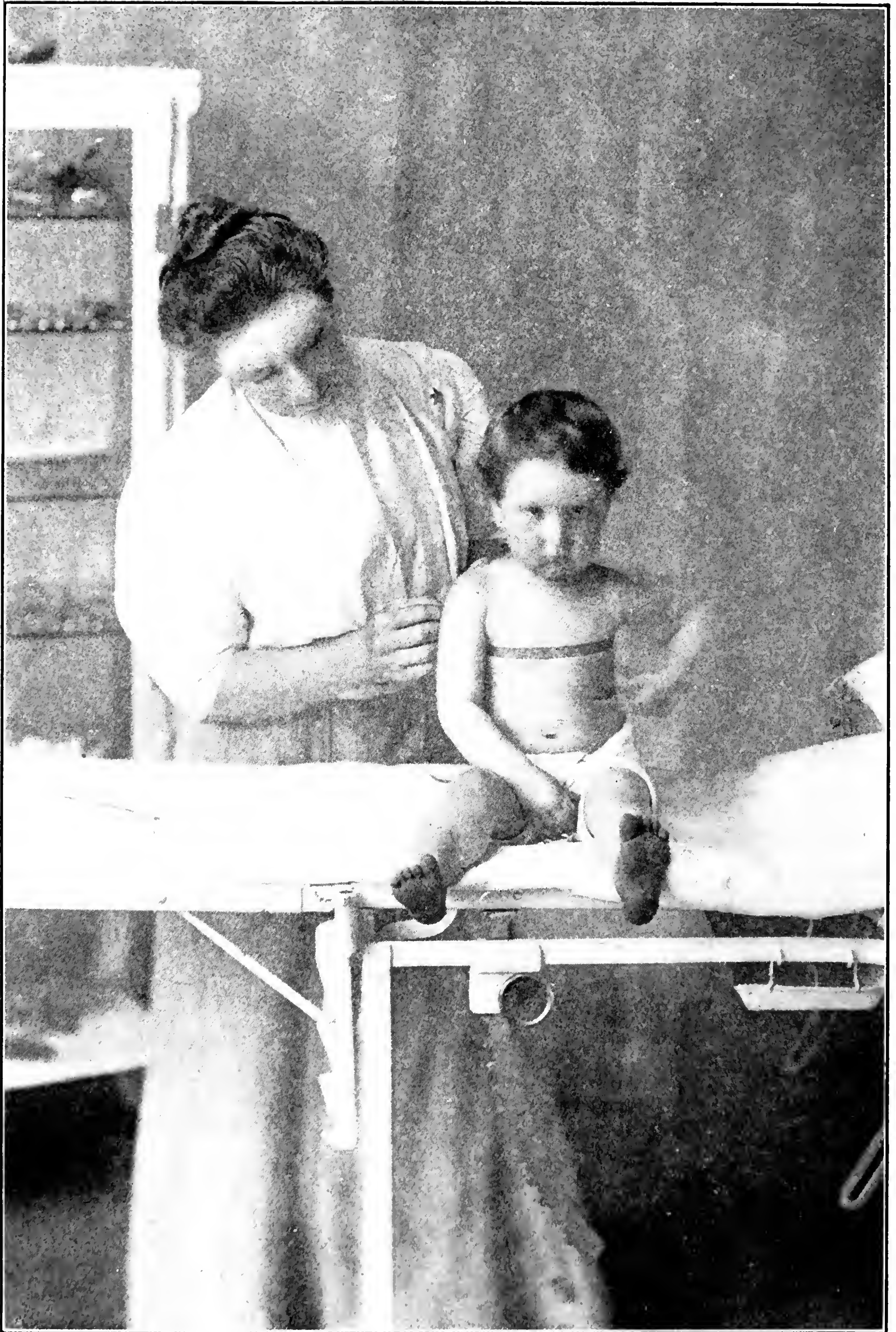


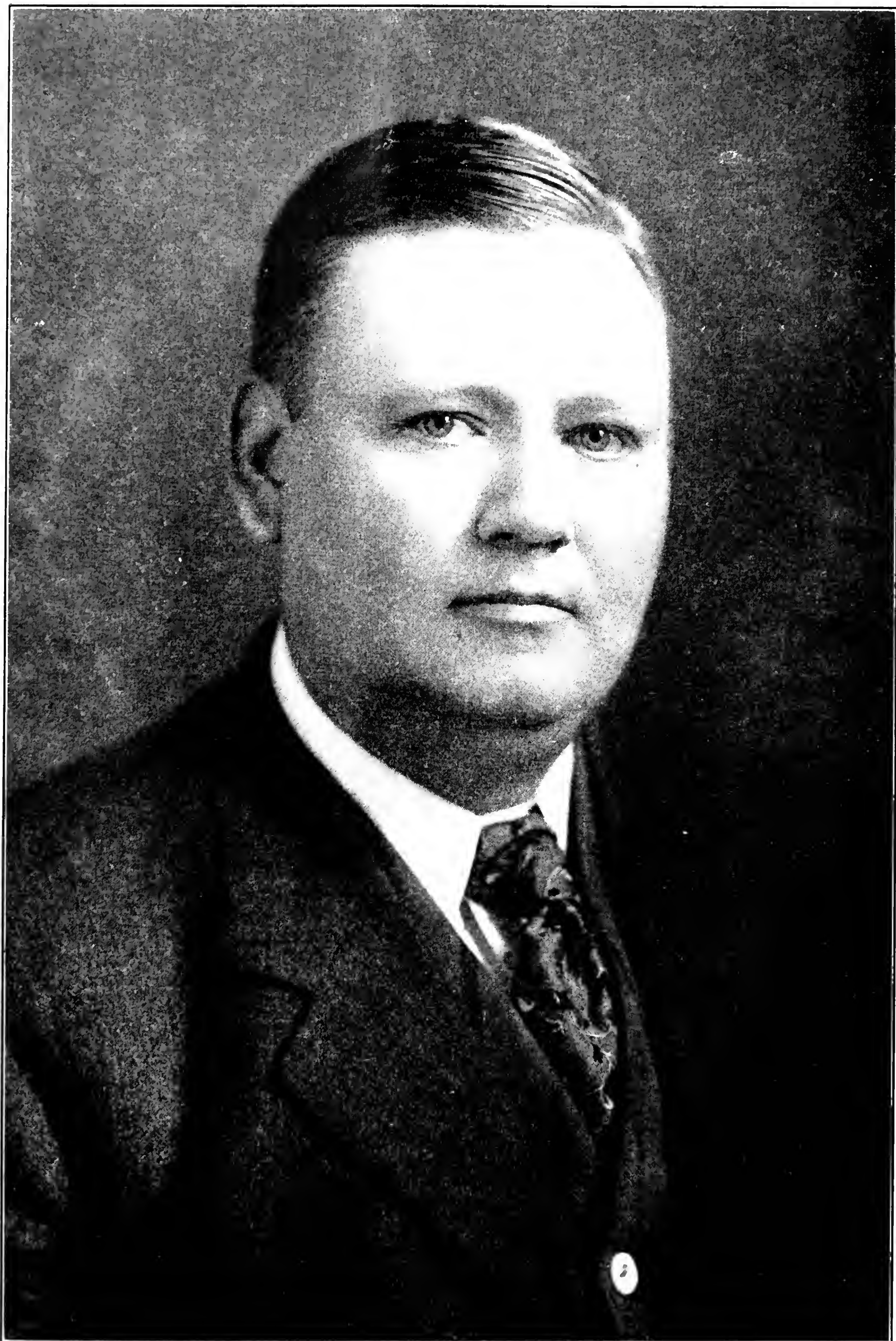
AN EXHIBIT IN THE IOWA BABY SHOW

AT THE STATE FAIR WHERE BABIES ARE ENTERED FOR PRIZES AND ARE JUDGED FOR PHYSICAL EXCELLENCE EXACTLY AS THOROUGHBRED CATTLE ARE JUDGED; AN EXPERIMENT IN PRACTICAL EUGENICS THAT IS SUCCEEDING BECAUSE IT APPEALS TO THE COMPETITIVE INSTINCT IN MEN AND WOMEN [See page 228]

DR. SAMUEL P. ORTH

LAWYER, EDUCATOR, ECONOMIST, AND TRAVELLER, WHO WAS LATELY CHOSEN ACTING PROFESSOR OF POLITICAL SCIENCE AT CORNELL UNIVERSITY AND WHO HAS WRITTEN PERHAPS THE MOST ILLUMINATING FIRST-HAND STUDIES OF SOCIALISM AND LABOR THAT HAVE APPEARED IN RECENT TIMES

(See page [illegible])



Photographed by Matzene, Chicago

MR. WILLIAM J. HARAHAN

WHO RECENTLY RETIRED FROM THE ERIE RAILROAD, OF WHICH HE WAS VICE-PRESIDENT SINCE JANUARY, 1911, TO BECOME PRESIDENT OF THE SEABOARD AIR LINE RAILWAY

MR. HARRY A. WHEELER

BANKER, AND PRESIDENT OF THE CHAMBER OF COMMERCE OF THE UNITED STATES, THAT PURPOSES TO FEDERATE THE LOCAL CHAMBERS INTO A NATIONAL ASSOCIATION WITH BROAD IDEALS OF COMMUNITY ADVANCEMENT

THE GROWTH OF AMERICAN CITIES

MUSKOGEE, OKLA., AS IT WAS IN 1899 (ABOVE) AND AS IT IS TO-DAY; ANOTHER EXAMPLE OF THE AMAZING PROGRESS OF MUNICIPAL DEVELOPMENT

THE ELECTION

TIRED of unkept promises, of personal wrangling, and especially of continued favors to privileged persons and classes, the people have called a new political leader into their service. The election of Governor Wilson to the Presidency by so large a vote as to leave no doubt of a deliberate national wish means that the nation is ready for his programme at Washington. The essential part of that programme, as he has clearly explained it, is the release of the Government from the grip of Privilege. The victory is emphasized by a Democratic majority in the Senate and an increased majority in the House after next March. The country, therefore, accepts not only Mr. Wilson but Mr. Wilson's party. The full responsibility of the National Government will be put on them; and the hindering division of party responsibility will soon be ended.

The party will go into power in the White House and in the Capitol with a free hand, with the sympathetic support of the people, and with the good wishes of its patriotic opponents. The dangers that await it are dangers from within, such as office-hunger and the vanity of individuals among its leaders. If they show self-restraint and do good "team-work," they are likely to have a long lease of power. Their essential programme is simple — not easy, but simple and clear; but it will call for great self-restraint and patience.

II

For the moment, the public mind is fixed less on the party than on the President-elect; and his qualities and equipment are under even more careful review now than they were before the election. All over the world men are wondering and asking one another what qualities of construction and of resistance Mr. Wilson has. For the simple truth is, the Presidency has become an almost impossible aggregation of duties and opportunities and temptations. The office has become much more complex than it used to be and much more complex and onerous probably than any other office in the world. The possibilities and opportunities of action are so numerous that in a sense it becomes a different office with every President.

Mr. Wilson by temperament and by philosophy holds steadfastly to a small body of clear-cut doctrine, the central idea of which is the old commonplace, now so long forgotten that many men even deny it — that nobody should get any private advantage from the Government over his fellows. Simple as that sounds, it is very difficult to carry into effect. Privilege in some of its forms is very complex, very pervasive, and crops up everywhere. It has, in fact, woven itself into every part of our political life.

This view of government — very firmly held — is the keynote to his political life. As to method, he believes thoroughly in the party as an instrument of government. He believes in "team-work." He tries to persuade, and he is willing to be persuaded. He seeks and welcomes counsel from any frank man or group of men. He will never undertake to "drive" Congress, but he will at every step consult it and confer with it, regarding it as a sharer of the same responsibilities that he has assumed and equally responsible with him.

Now the strong weapon, the substitute for the big stick, that such a man carries is the very atmosphere in which he works. He works in the open. His task is done within the sight and the sound of the people. There can be no invisible Government. When the final test comes, men will be found divided into two camps, those who have some personal or political debt to pay, some obligation to discharge, some interest to serve, and those who are willing to work wholly in the open and are so situated that they can. Thus everything depends on the atmosphere which the Government breathes and in which it works. If Mr. Wilson's Administration start with a clear understanding that nothing shall be done behind closed doors — which is his method — every man who goes behind a door must explain his action. If it start with some doors open and some doors closed, nobody is forced to explain. Mr. Wilson has often said that what he did as Governor of New Jersey was to create a situation wherein men were free to act and work openly. Presently they are

forced to act and to work openly. Now, if he can carry this atmosphere into Washington, the whole complex business of government will be simplified beyond recognition. And this he will try to do.

His most difficult task will be the selection of his advisers and associates — his political family. If he find men who by temperament and training are like him in this respect, he can begin his Administration with so many doors open that all the rest will soon have to be opened; and the real work of Congress, too, will have to be done within the sight and the hearing of the people and not in closed committee rooms and secret conferences.

The temper of the President-elect and his philosophy and method were all shown by his first utterance after his election. He said to a group of students who gathered at his house on election night:

> I have no feeling of triumph to-night, but a feeling of solemn responsibility. I know the very great task ahead of me and the men associated with me. I look almost with pleading to you, the young men of America, to stand behind me, to support me in the new administration.
>
> Wrongs have been done but they have not been done malevolently. We must have the quietest temper in what we are going to do. We must not let any man divert us. We must have a quiet temper and yet be resolute of purpose. But let us hear them all patiently and yet, hearing all, let us not be diverted.
>
> I know what you want and we will not accomplish it through a single man nor a single session of the houses of Congress but by long processes running through the next generation.

That "quiet temper" is worth noting.

III

The victory of Governor Wilson in the Electoral College, so large as to be unparalleled in recent times, is due to a considerable degree, of course, to the split in the Republican party — in a word, to Mr. Roosevelt. The future of the parties, therefore, becomes a subject of more than usually interesting speculation; but it is yet mere speculation. This only is certain — the people had become tired of the long-drawn-out rule of privilege, and Mr. Roosevelt and Mr. Taft, unlike in all other respects, had continued this rule; and party loyalty sits very loosely on men in these days. The Republican party can never again reckon on a victory from sheer party loyalty. In that sense it is dead — as dead as the Democratic party was under its long dominance by Mr. Bryan. The ever-increasing vote that is not determined by party ties or party traditions holds the power to decide elections.

And the Democratic party would make a grave mistake if it interpreted its great victory as an indefinite lease of power. The truth is, it is yet under suspicion in the minds of enough voters to defeat it at the next general election, if they so choose. Thus the Republican party stands convicted (very largely by its own members), and the Democratic party is on trial.

IV

As for Mr. Wilson's personal qualities, he is dignified simplicity itself. He cannot do a merely spectacular thing. For instance, no newspaper correspondent during the six months of their inquisitive attention to details, thought to say how he was dressed. He has manners and therefore few mannerisms. A quiet, modest gentleman with a spirit of good comradery when he is in congenial company, his prime interests are intellectual. He is a good story-teller and many of his stories come from unusual sources — good old books of English literature and especially from Bagehot. No other man in America has Bagehot so well in mind. He plays a fair game of golf, he has a fondness for baseball — now, of course, as a spectator — he can ride a horse when he must, he is a good walker, he eats sparingly and carefully, he sleeps well and long, and thus finds complete physical restoration. The charm of the man is his well-balanced, cheerful philosophy, for he takes life with a keen relish but with quiet dignity and genuine reverence, tempered with humor; and in his talk as in his public speeches his clear-cut mastery of good speech is notable. We have never had a President who expressed himself in such vigorous pure English, nor a man with a better mental furnishing.

It will be no small incident, therefore, of

Mr. Wilson's Administration that the political philosophy which he holds will find adequate expression. We shall have state papers better written than any preceding modern examples of this rather heavy form of literature. We shall have public utterances without boasting and without commonplace.

What does he know about business? That is a question which you will for some time hear often asked. If you mean by business the complicated machinery of trade, such knowledge, for instance, of wool-production and cloth-manufacture as enable a man to understand Schedule K, the new President will know as much as other Presidents have known — which is nothing — but possibly with this difference: he will seek to have the public informed from more than one source of information. Concerning banking and currency, what has the knowledge of the last half-dozen Presidents and the last dozen Congresses profited us? There has been knowledge enough. The trouble has been the privileged hindrances to using it. If we can once get wholly disinterested action, there will be no lack of knowledge.

With this admirable equipment and this clear-cut programme and with the most emphatic approval of the people, Mr. Wilson will become President with high promise of success.

MR. WILSON'S "THE NEW FREEDOM"

THE speeches delivered by Mr. Wilson during the campaign were remarkable utterances. Seldom has political discussion taken on so lofty and important a tone — perhaps not since Lincoln's historic deliverances on slavery and the Union. He gave a new meaning to the word "liberty," when he declared that the people had no need of guardians and trustees, either in politics or business. Democracy was a very plain matter a generation or two ago, when society was simple, when manufacture and trade were carried on by individuals, when state and national concerns were few and clear, and officials could be and were in close neighborly touch with the people. But democracy has become a very different thing for a nation of one hundred million people, living under altogether new conditions of life; the modern life of swift communication and transportation and highly centralized industry. It has been uncertain whether democracy could survive in the new era. A political theory like that which Mr. Roosevelt has popularized, for instance, is declared by those who hold Mr. Wilson's theory as not democracy — it may be something better or worse; but it is not democracy.

Mr. Wilson is the first public man to make a new statement of democracy for the new conditions. That's the subject on which he has been thinking out loud, as it were, during the past months, with results of tremendous importance; and it is more important now than ever that the people should clearly understand this philosophy and programme. It was heard by hundreds of thousands during the campaign, though of necessity no single audience could be given more than a part of it.

The World's Work is glad to announce that the President-elect appreciates that necessity and that he will give the country in book form an arrangement of the matter of his speeches. It will not be a mere reprint of his public utterances but a systematized statement of his creed, a formulation of his philosophy, and it is a safe prediction that it will attract wider and more eager attention than any other book on public questions. While the book (which will be issued at the earliest date at which it is possible to complete it), is in preparation, the World's Work will present copious sections of it.

THE DEFEAT OF TURKEY

A GREAT war has been practically settled in a few weeks. What Russia has tried to do for two hundred years, Bulgaria has done at a single effort.

The military side of the Bulgarian-Turkish War is conclusive. The Bulgarians and their allies were not only brave and able soldiers but were prepared for war. The Turks were not. Par-

ticularly their commissary failed them. The standing army of Turkey was about 725,000 men. The combined armies of the allies contained approximately 600,000 men. But the Turkish army was scattered all over the Turkish Empire almost as badly as our army is scattered. The allies reached Constantinople without meeting half of Turkey's trained troops, and those that they did meet were ill-fed and ill-equipped.

Their work was done so quickly that it looks almost as if it were not difficult, but it must be remembered that a less skilfully arranged and prepared attack would have given the Turks time to get their army into shape to make use of their courage and spirit.

In warfare, this war teaches dramatically what the Russian-Japanese War taught and what the Franco-Prussian War taught, that a very short time is necessary for a well equipped and prepared Power, whether it is little or big, to win before an ill prepared opponent is even ready to fight.

II

The government of the people of European Turkey is not the most important question which the allies' success brings up. Bulgaria's success is but one act — though a very dramatic one — in a play of many centuries.

Perhaps the chief actor is Russia. For two hundred years Russia has fought to wrest from Turkey its most valuable outlet to the Mediterranean. The Czar took from the Sultan the Crimea and all his other South Russian possessions. Austrian and Russian armies gave Bulgaria, Roumania, and the other Danubean provinces the beginnings of freedom from Turkish rule. As far back as 1829 a Russian army reached Adrianople and forced Turkey into a disadvantageous peace. Russia has helped Bulgaria in the past many times. What does Russia expect to get from the Bulgarian success?

England is the next actor. If Russia could have control of the Dardanelles, the English route to India — the Suez — would be jeopardized. In 1841, England forced a treaty from Turkey that prohibits any warships passing the Dardanelles. In 1853, England with France joined the Turks against Russia in the Crimean War. It was to keep Russia out of the Mediterranean. England can not now afford to give up the point for which it went to war then.

Austria has a territorial interest in any settlement of boundaries in the Balkans. It recently annexed Bosnia and Herzegovina. The Balkan States look with suspicion upon Austria's motives. From the military point of view Austria is greatly interested in the control of the Servian plateau, for the passes in the Balkan mountains in a measure dominate not only the approach to Constantinople in one direction but the approach to the Danube and to Vienna in the other.

Turkey has lost much other territory that it once conquered and held. It was forced to grant independence to Greece and to give up Egypt to England; Algeria, and in reality Tunis, to France; and Tripoli to Italy. Dismemberment has been continuous. The Turkish Government, rotten to the core, is inevitably doomed at some time to lose control of its one inestimably valuable position; and it is hoped that the end of the Turk in Europe is now come.

A DEAD WASTE OF MONEY

EXCEEDINGLY wholesome and instructive is the publicity that Senator Clapp's committee has given to campaign contributions. Take this one fact which had been kept quiet for eight years: Mr. Thomas F. Ryan's contribution of $450,000 to Mr. Alton B. Parker's campaign fund. That is a rather startling revelation, so startling as to cause a zealous financier of one of the Presidential campaigns this year to exclaim: "It makes me feel like a plugged nickel." That's one point of view — this rivalry of rich contributors.

Let us assume that Mr. Parker knew nothing of this contribution. Let us assume that Mr. Ryan made it wholly from his zeal for the Democratic party. Assume every innocent thing you like. Still where does this leave us?

It left the Democratic party in 1904

— at any rate it left the active organization of that party — in the position of being something very like the personal property of one man. Let us continue to assume that his motives were high and unselfish. What would have happened if Mr. Parker had been elected? The campaign organization, thus bought by Mr. Ryan, would at least have been aware of his purchase of it.

And, when Mr. Parker was not elected, what happened? Mr. Ryan was willing again in 1912 to contribute to the pre-nomination expenses of Governor Wilson, who declined his help; and he gave it to Mr. Clark and to Mr. Underwood. If either of these gentlemen had been nominated at Baltimore, Mr. Ryan would surely have given even more largely to his campaign funds; and, if he had been elected, Mr. Ryan would have stood in the attitude to the Administration of a man who had given (let us say) at least a million dollars to Democratic campaigns — all innocently, let us assume. Still the question would have remained (and it would never have disappeared) — Do the people want a man President to whose election any one man has contributed such a sum? and would the people care to have a party in power whose Presidential nominee had thus been elected?

All which leads straight to the conclusion that, on the day when Governor Wilson declined Mr. Ryan's help, in his conversation with Colonel Watterson, he saved his party as well as his own political fortunes. The sad part of the story is, Mr. Ryan will never receive the thanks that his great contribution ought to bring to an unselfish man. Under any supposition, therefore, the conclusion is inevitable that he wasted his money.

Other gentlemen of like generosity, though of less wealth, have suffered the same fate. Who feels grateful to any of them?

It is going to be hard work in the future to get money for great national campaigns; and so much the better for the campaigns. What Mr. Ryan and his fellows of all parties have brought to pass is the expulsion of Moneybags from the political temple. From this point of view the change is worth all that it cost them. Politics will become more interesting as it ceases to be the sport of millionaires.

We have assumed, you will observe, their utter innocence and their high motives throughout; and, on this assumption, the argument is the more conclusive.

In England there are huge secret party campaign funds, and generous contributors to them receive titles and other high honors. Men thus buy peerages. *Our* most generous contributors to such funds do not now receive even the thanks of the people. They have only the approval of their own consciences; and Mr. Ryan's conscience is entitled, so far as is yet known, to the largest self-approval extant.

SUCCESSFUL DIRECT LEGISLATION

WHEN the people of California last year amended their state constitution to permit the use of the initiative and referendum, the usual argument was made against the change that these devices of direct legislation would be too cumbersome for good practical results. The first year's experience with them has refuted that argument. Only four measures were presented to the people by these means. Three of these were new laws and amendments to the constitution, submitted under the initiative provision at the request of 8 per cent. of the voters. The fourth was a referendum of three enactments of the last legislature (all on one subject), and was submitted to the people for approval or rejection at the demand of 5 per cent. of the voters.

The text of these laws and the arguments for and against them were published before the election by the secretary of state. They made a small pamphlet of forty pages, in clear type. One page was used for the title of the pamphlet, another for the formal notice of the secretary of state, five more for the text of and arguments on two constitutional amendments whose submission was effected without using the initiative and referendum, and one more for a facsimile of the propositions as they were to appear on the ballot. Thus, only thirty-two pages were devoted to the initiative and referendum measures. Eight

of these pages were occupied by quotations in full of the text of existing laws that merely happened to be parts of the same general enactment as the sections that would be affected by the proposed changes. They had no relation to the proposals, and by a carefully explained and perfectly intelligible method of type-setting, they clearly indicated by their very appearance that they were not germane to the issues of the vote. In other words, it was necessary that the voter read only twenty-four pages of the pamphlet to be fully informed on the text of the proposed changes and to get the arguments for and against those changes. One evening would be time enough for any voter to master these details so that he could form an intelligent opinion about the merits of all the propositions.

This cannot fairly be called a violent tax upon the time and patience of the electors. Neither is it a revolutionary breaking away from the custom of leaving the routine enactment of laws to representatives in legislatures. On the contrary, it is a stimulating exercise in citizenship for the voter and a safeguard to insure that their legislative representatives shall really represent. As Mr. Wilson once said of the recall, these devices of initiative and referendum are useful mainly because they are "a gun behind the door."

REPUBLICAN INSTITUTIONS IN CHINA

THE Government of China has announced the provisions under which the new republic will elect its National Assembly, thus completing the constitution and organization of the new nation.

The National Assembly, corresponding to the Congress of the United States, consists of two Houses, the Senate and House of Representatives. Senators are to be elected by the provincial assemblies, which correspond to our state legislatures, ten senators from each province; but the senatorial body is to be increased by eight senators elected by the Central Education Society and six senators to be named by Chinese residing abroad. The senatorial term is six years, one third of the body retiring every two years.

Representatives will be elected as they are in the United States, the apportionment being on the basis of population, as it is with us, and there will be one representative for each 800,000 of the population. However, China will enjoy proportionate representation — an advance in republican government which we in the United States have not yet reached. The concurrence of the Senate and the House of Representatives is necessary before any law can be enacted. The Chinese will also elect a reserve or alternative for every senator and representative, to take his place in case of disability. The first National Assembly will sit jointly for the purpose of drafting a constitution of the Republic; and in this work a majority of two thirds of both Houses is necessary for the enactment of any article.

The qualifications for the franchise are interesting. A male citizen twenty-one years of age who has resided in the electoral district for two years is eligible to vote provided he possesses one of the following qualifications:

(1) If he pays $1 in direct tax to the Government annually; (2) if he owns irremovable property of the value of $250; (3) if he is a graduate of a school, elementary or high; (4) if he has an education equivalent to that of an elementary school. The insane, the illiterate, bankrupts, and opium smokers may neither vote nor hold office, nor may officials, executive nor judicial, soldiers, sailors, police, priests, or monks vote.

There are a number of interesting details in the Chinese scheme, which on the whole may be said to represent an idea of republican government easily comparable with the advanced nations. Yet the United States still withholds its recognition from the new Chinese Republic.

TO PRACTISE GOVERNMENTAL CONSERVATION OF COAL

FOR the first time in this country a Government owned coal mine has been leased to a private company to operate, under regulations prescribed

by the Bureau of Mines to insure the safety of the miners and to prevent waste of coal.

The Bureau of Mines has long advocated the lease of coal mines upon Government land for three or four reasons.

In mines operated by private capital but leased from the Government, the Bureau can stipulate the use of proper explosives and other regulations of safety, to make American coal mining as safe as mining is abroad. At present, by the usual practice of American mining, nearly as much coal is left in the mines as is taken out, left so that it never can be got out. The Bureau has continuously urged that this waste shall cease, that the coal supply may be prolonged, and under the leasing system it can make rules that will minimize this waste.

The lease of Government coal lands upon a royalty basis is also a better business method than the old method of selling the land, because leasing upon a royalty basis is in reality selling the exact amount of coal instead of a more or less well known amount which might lie under an acre. In certain places such as Alaska, too, government ownership is looked upon as a preventive of a monopolized coal field.

All these things make this first lease of 2,480 acres in Wyoming an important event. The lease runs for ten years with the preferential right of renewal by the operating company. The mine is to be operated under the rules of the Bureau of Mines. The company agrees to pay a royalty of six and a half cents a ton on all coal mined during the first five years of the lease and eight cents a ton for the next five.

Whether this mine can be successfully operated upon this basis is the crux of the matter, for the advocates of safer and less wasteful mining, in and out of the Bureau, will have a strong argument in their favor if this first leased mine is successful.

THE BEGINNINGS OF A REVOLUTION

IN WISCONSIN, a state that has an admirable school system, 94 of every 100 children (in the towns and in the country) finish their education with the common schools. That is to say, only 6 of every 100 go to college. In a state that has few cities, most of these of course are country folk and they will continue to live in the country.

To fit them for rural occupations, the state began several years ago to encourage the establishment of country schools of agriculture and domestic economy; and five such schools have now been going long enough to show results, and two more have just been authorized. These schools are coeducational, with courses of two years; the entrance requirement is work equal to the eighth grade of the public schools; the state gives $4,000 to each every year and a county tax yields the rest of the money. The faculty of the Dunn County school, for example, consists of the principal, who teaches field agriculture and horticulture, a teacher of agricultural engineering, a teacher of animal and dairy husbandry, a teacher of domestic science, and a teacher of history, economics, and English — three men and two women. Last year there were 84 students. In another school there were 153. The buildings of these schools range in value from $20,000 to $60,000; the cost of maintenance, from $6,000 to $14,000. The Winnebago County school, is a 30-room brick building — laboratories, recitation rooms, assembly hall, library, blacksmith and carpenter shops, plant house, kitchen, and sewing rooms. Under another roof are a stable and stock-judging pavilions. The school-farm consists of 11 acres.

In addition to the work done with the students, these schools give direct help to farmers, such as making plans for buildings, silos, and water-troughs, testing dairy products, seeds, and cattle (for tuberculosis) and soils, planning drainage, and assisting in selecting animals. So far most of the graduates have gone back to the land — become farmers and farmers' wives.

Now, while comprehensive schemes for rural education are brought up and discussed in Congress — plans that have an oratorical promise of a millennium in them — Georgia, Alabama, North Carolina, Oklahoma, Arkansas, California, Minnesota, New York, and Michigan have begun a rural school system more or less like this Wisconsin plan. In fact the idea

spreads so fast that presently we shall have such schools all over the country.

And this means the definite rebuilding of country life.

II

And the idea grows with experience. Here, for example, is an effort to make a comprehensive course of study for such schools. There should be five buildings:

The Home (the children's house), containing a teacher's room, a kitchen, a workshop, a sewing room, and a tool room.

The Farm House

The Workshop

The Book House

The Boarding House

besides poultry houses and barns.

The course of study should start from these natural divisions: Human Life, Animal Life, and Plant Life — a plan that would require seven or eight teachers.

Out of this experience, which becomes richer and more varied every year, we shall presently find the kind of school for every part of our country which will do for our rural life what the schools of Denmark have done to make that country and its people prosperous; and this is the greatest miracle in building a civilization that has been wrought in our time.

III

No two schools of this general kind would be alike in all respects, for every one would be adapted to the community that it must serve — the adult as well as the child community. And a preliminary step to the making of any such school (so experience is proving) is a careful study of the community. A "survey" of the economic condition, family by family, of the industries and means of livelihood, of the approximate incomes, of the economic possiblities; then of the social and intellectual condition of the people, of their family life, of their recreations and organizations — all this is done by definite answers to many well-planned questions. Every school-board and every school principal must have such specific and detailed information before they can wisely plan and build a school for that particular community.

Let us thank Heaven that we have come at least this far: we recognize as a fact the necessity of making every school fit its own community; and we have left behind the old notion that a school is a school and that a college should say what kind of school a country neighborhood should have. And this is much. It means a deep ploughing of the old field of what we once called "educational thought." "Educational thought?" Rats! We are beginning to come to these problems with common sense, and the schoolmaster of the future must be a real man.

OUR ABSURD FINANCIAL SYSTEM

WE HAVE big harvests in wheat, corn, oats, potatoes, hay, and nearly everything else. There is so much prosperity, one reads, that the banks have been unable to meet the demands for crop-moving money, and the farmers have been obliged to finance themselves through a good part of the expensive harvesting process.

That seems an absurd proposition on the face of it — that there is such a wealth of live, quick, commercial assets in the land (such as wheat and corn and oats) that the banks cannot finance them. Yet it is a fact. It is perhaps the most astounding piece of financial folly on record.

Put it down plainly, so that a man may realize it. Here is our biggest class of producers, which annually goes heavily into debt in order to plant and to till and to harvest and thereby produce wealth — the annually renewed wealth of the nation. This wealth has been produced this year in very great abundance. Of course, it must be moved, and turned into cash or credit — into some form that will permit the farmer to pay his debts and to spend his surplus. He may spend it any way he likes. It makes no difference how he uses it, so long as he has it to use. Then it becomes dynamic wealth. But so long as it stays on his farm, it is just as dead as though it were still in the fields or under the soil. It is like a gold mine sealed and shut.

But the banks cannot move the crops. Therefore the farmer cannot pay his debts. Therefore his perfectly good assets become

delayed assets. If such a thing happened to any other class of producers in the United States, the noise that it would make would shake the nation; but the farmer is a patient being and he does not know what is the matter with him.

In any other civilized commercial nation such a thing could not happen twice. Here it happens over and over again. Then a lot of tiresome people to whom nobody listens talk about currency reform, a committee is appointed, emergency currency gets into circulation and in time is retired, and the same train of events starts over again. When the farmer cannot get his goods to market it is a peaceful congestion and he grumbles a bit but waits his time. When the squeeze hits Wall Street or the merchants and manufacturers, it becomes a panic.

Is it not time to start real work on this pressing task instead of inventing emergency devices to meet some little crisis and then forgetting the recurrent need? Isn't it time for some one to undertake this big job in whom the people will trust and believe? It looks as if the Aldrich plan had been abandoned. But we should begin work on a plan that will go through.

HAVE WE LOST SOUTH AMERICA?

THE United States has spent a vast sum to cut the Panama Canal. For every American dollar spent in that task, other nations have spent two dollars getting ready to seize the traffic of South America, which is expected to experience a marvelous awakening as a result of the Canal, and to strengthen their commercial footholds on our own Pacific Coast and in the Orient.

It has been estimated that Great Britain, Germany, France, and Holland, and five of the South American States — Argentina, Uruguay, Brazil, Chile, and Peru — have already spent more money in the aggregate, on new railroads and new harbor preparations, than the United States has spent at Panama.

Government expenditure, however, is but one part of the commercial struggle. Governments build harbors, push forward railroads, subsidize ships for mail and sometimes for traffic of all sorts. It is private capital that builds fleets and puts them on the sea. In practically every shipyard of Europe to-day, work is rushed on the building of ships for the Panama trade. Some are to be put on the long run from Europe to the Orient through the Panama Canal, others in to the South American trade, and still others into the trade with our Pacific Coast.

By way of contrast, consider the work in the harbor of New York. The city has just completed two new piers. The demand for them is so small that one of them has been leased at a price that means less than 2 per cent. on its cost. Private capital has ceased to push forward in competition with the city. The only powerful private concern that builds docks on the harbor front has apparently ceased to compete with the city and has turned its attention to the building of industrial buildings, lofts for manufacturing, in which the city cannot compete with it. Nothing goes forward. Instead of the hopeful rush and bustle of the ports of Europe and of South America, New York stands still.

Many other American ports move forward to the commercial battle of to-morrow. New Orleans, perhaps, leads, with one new steamship line of three ships so far already trading to the South. Other ships may be added in the future. In that city the Canal is a great commercial watchword. In New York it is a tiresome and remote subject. In New Orleans they hope that it will be the beginning of a mighty growth. In New York they only seem to fear that perhaps it will make it harder for New York to hold the commanding place she has always held in seaborne commerce on the coast.

It is not possible to exaggerate the possibilities of the future trade of South America, under the stimulation of the Canal; for hundreds of millions of pounds of English money have been poured into those Latin-American countries during the past ten years, building railroads, preparing for great wheat harvests and droves of cattle and a dozen other vast industries that have brought the South American countries forward with a rush, equalled

only once before in history, namely, when our own West was settled and developed.

In South America they are subduing great areas equal, acre for acre, to any on the North American continent. England, France, and Germany, both through their governments and by private capital, have grasped the truth, and rushed to grasp in turn the fruits of their knowledge. Even Canada has organized, and is building fleets to trade with South America, one out of Vancouver, and the other out of Montreal. Japan, India, and China, at the hands of private capital, will send their ships presently into these Southern ports. It is to be the commercial battleground of to-morrow.

It seems a pity that, because of minor matters, such as our public jealousy of railroad power, our Government should be unwilling or unable to further measures that will strengthen the hands of American commerce in the South. Again, it seems a pity that, for lack of a plain common-sense policy in administration, the port of New York must sit by with hands folded and make no serious effort to be ready to bid for the commerce of the South.

One hears always that if the South American markets become great, they will fall into our hands. That has been always our excuse for inertia, the reason for a do-nothing policy, both governmental and private. Meantime the South American markets have become great; and they trade with England, Germany, and France. Commerce follows usage. It may be that already the habit of direct European trade has become so firmly fixed that the United States can never regain the advantage that we have lost.

PUBLIC BODIES AS REAL ESTATE AGENTS

A REAL ESTATE agent in a good agricultural part of the country, where more men are badly needed on the land, writes to the WORLD'S WORK that he is greatly discouraged with his business. He tells his experience — how he visited many parts of the United States before he decided to settle where he now lives. He had had experience with farming and he makes no complaint about his own investment. But he thought that he might also give "real, genuine service" to other home-seekers and to the community. He is not dependent on his real estate business for his livelihood. Although opportunities for good land investments are abundant about him, "more people are steered to poor, unproductive, valueless land than to good land. It is a positive crime to treat inexperienced land-buyers as many are treated in this state"; and he declares, "I could get rich if I had no conscience."

While of course there are many other real estate dealers as honest as this writer, dishonest dealers and promoters are the curse of every region where there is an active demand for land. And the home-seeker ought to be protected from them.

II

An excellent method of protection has been worked out by the Sumter (S. C.) Chamber of Commerce, which its secretary explains thus in a letter to the WORLD'S WORK:

> The Sumter Chamber of Commerce offers to place without cost one hundred white families on farms of from thirty to fifty acres, they to work on a share crop basis. Seed and fertilizer will be furnished free. All needed tools, implements, live stock, and provisions will be advanced. Each of these tracts have small cottages upon them which will go with the contract and which will be made comfortable. The land is rich and ready for cultivation.
>
> Under this offer any poor deserving farmer can live in a climate where he can work his land all the year and where he will need little fuel and small expense for clothing. He will be near the great markets of the North and his produce will reach the market when it commands a high price. We will personally see that he is placed only in a healthy location and that he is given a cordial welcome and is assisted to understand his new conditions. We want white farmers here. We offer no more than has been offered the Negro for years and under which plan he has become independent. By this plan an industrious farmer may soon become acclimated and purchase his own lands. At the same time we gain that which we need — the white settler and a division of our large estates.

This implies, of course, that the new-

comer will be permitted to buy land and to pay for supplies without profit to the Chamber of Commerce and at a fair price and on reasonable terms. This fulfils what seems to be a necessary condition for moving a thrifty population to farm lands — the protection and guidance of some public body of citizens, governmental or other, who are willing to do this service for the resultant benefits to the community. Such a plan cannot fail.

THE RAILROADS AND THEIR MEN

A FEW months ago the WORLD'S WORK published an account of the Committees of Safety on the Chicago & North Western Railway. This organization lessened the accidents on the road materially; and on other roads similar efforts are made.

But the rules of safety are not always obeyed, as several recent, terrible wrecks vividly attest. The men become careless of danger, say the officials. Undoubtedly. Undoubtedly also, employees are driven to disregard the rules of safety. A railroad employee of twenty years' standing has written this letter to the WORLD'S WORK:

> Orders must be issued forbidding certain practices. Now, no objection would be found to this if after issuing these orders you were allowed to work and live up to them. But let me tell you. I only wish you were "up against it" and your bread depended upon it. You are given work to do and if you do not do it in the time expected. why, they get a man that can. Last winter some of our old and best engineers were pulled off their runs because they were not making the time and younger men put on who were willing to disregard many of the rules and bring their trains in on time. This is true of the yard work also. The men understand that the officers want them to take chances if they do it on their own responsibility and take whatever comes if anything happens.

And the public suffers the consequences. When employees are forced to take risks, passengers are not safe; and, even if both the management and the men have the best intentions, if there be too little frankness between them, the traveler is like to suffer from terrible results.

The public ought to make the penalty for wrecks more severe, to hasten the elimination of grade crossings, the provision of longer cross-over switches — switches that connect parallel tracks — and rigidly to enforce all the rules of safety in good faith.

TO PREVENT ACCIDENTS

THE ferment of enthusiasm that was aroused by the propaganda for conservation has left behind it a residue of quietly efficient agencies for safeguarding the resources of our economic life. Such an agency is the American Museum of Safety, which was founded by manufacturers and engineers upon the motto, "Now Let Us Conserve Human Life." The Museum maintains halls in the Engineering Societies' Building in New York for the exhibition of devices to prevent accidents. The following sentences from its year-book for 1912 describe its purposes and methods:

> The first and only concerted effort to bring together collections of actual devices, models, and photographs with their interpretation of practical application to the needs and conditions of the American shop practice . . . The Museum is absolutely non-commercial. No orders are taken, no exhibits are sold, nor does it engage in the promotion of any devices. The majority of the exhibits are not patented, hence available for all. No exhibit is accepted unless it has a safety feature and is passed upon by the Board of Approval, consisting of experts in the various industries. There is no charge for space; all demonstrations are made by its own staff and it is free to the public.

Other means of spreading the knowledge which is accumulated by the Museum are conferences and lectures. Last year, conferences were held at the Museum with the New York commissioner of labor and forty-three inspectors, with the Iron and Steel Electrical Engineers, with the superintendents of the Du Pont Powder works, with the New York section of the Institute of Mining Engineers, and with other responsible executives of industrial plants. The Museum has a noteworthy collection of "books, pamphlets, photographs, lantern slides, and special reports on safety." During 1911, free lectures on accident prevention were delivered by representatives

of the Museum to the managers or men, or both, of twenty-five of the largest companies in the most important American industries, and to the pupils of the Boys' High School of Commerce of New York, and to the alumni of Cooper Union. The audiences ranged from 300 to 2,100 persons. The managers of several large corporations have declared that the knowledge of simple safety devices which they had gained from a little study at the Museum had greatly reduced their accident rolls, in some instances by one half.

This, then, is another hopeful sign that the old reckless era of "production at any price" is giving way to the era of a new spirit which adds caution and a humane regard for life and bodily safety to the eagerness for speed in manufacturing. The economic gain will be great, but the larger good will be in the moral effect upon the relations of employers and employees.

A STATE-WIDE MOVEMENT FOR CHILD HEALTH

THE campaign for general health supervision in the public schools of this country began scarcely more than twelve years ago. The practice is only about six years old. Minnesota is the first state to undertake the work as a state.

For the last two or three years there has been school inspection in seven of the larger cities of the state, St. Paul and Minneapolis naturally taking the lead, the former with one physician and three nurses, the latter with seven physicians and eight nurses. During the last year, more than 52,000 inspections were made in Minneapolis, and more than 16,000 children were treated on the recommendation of physicians and nurses. The doctor locates the defect; the nurse follows the case to the home and sees that the parents are advised of it and apply the proper remedy. Of the children examined in St. Paul in one term, 95 per cent. had some physical defect, and 68 per cent. required medical or surgical treatment.

The State Board of Health, under the lead of Dr. H. M. Bracken, realizing that the benefits of this work would be confined, for many years to come, to the cities, unless something were done to encourage it in the larger field, induced Dr. Ernest B. Hoag, of the University of California, to obtain leave of absence for one year and conduct a campaign of education among the teachers of the public schools and in the normal schools. For it is by the teachers that the most of the work must be done in the rural schools, until each community is educated to the point of engaging a local inspector of its own.

Doctor Hoag's experience in Pasadena shows the almost incredible extent to which child health and its commonest needs are neglected. Pasadena is what would be called a "selected" city; that is, the families there are mostly well-to-do and of a high grade of intelligence. Yet of 275 children questioned, 88 had much sickness, 57 had trouble with their eyes, 38 often had earache, 60 were seldom able to hear what their teachers said, and 82 were usually tired in school. These formidable figures are easily interpreted by the answers to other questions. Of these 275 boys and girls, 71 had never been to a dentist, 53 had never used a tooth brush, and 25 per cent. slept in rooms with all the windows tight shut.

II

Doctor Hoag's plan is to secure the establishment in every school of one of the three practicable forms of health inspection or supervision. The simplest of these is organization through a non-medical health survey conducted by teachers only. Any observant teacher will quickly detect lapses among the pupils from a normal health standard in appearance or action. A series of questions is provided, the answers to which furnish a "health index" for each child. Parents and local physicians will be informed of results and brought to do their part. Next, for larger centres there is recommended an organization with school nurses only, who can carry both investigation and remedy a step farther. Then all the cities will be brought to institute the third, or complete system, with at least one medical officer and as many nurses as the work may require. The State Board of Health at

the Capitol will act as a clearing house for all kinds of information relating to school hygiene and improved methods of supervision, prevention, and treatment.

III

While this work is in line with modern humanitarianism and our growing conception of the value of human life, it has an enormous commercial value also. To illustrate, it has been found that it takes nine years for children with enlarged adenoids to complete an eight-year course. There are at least 40,000 such children in Minnesota. The average cost of a year's schooling for each child is $25. This means the loss of a million dollars and of 40,000 years of time from one retarding cause alone. The continuing cash loss from defects that lower the individual's physical and mental capacity through his whole life is incalculable. The path blazed by Minnesota is sure to be followed by all the other states. When we are working to improve child health by sane, every-day, common-sense measures — such as are included in this scheme — there is no possibility of mistakes through too great enthusiasm or too rapid progress.

A CHILDREN'S CHRISTMAS

YOU give Christmas presents to your intimate associates. Very well, if you do not spend more than you can afford and if you select gifts every one of which has a particular and appropriate message. You also most likely go somewhat out of your way and renew a waning friendship here and there with a Christmas reminder of your good will. We all do these customary acts of kindliness, and it is these that make the season glad.

But what else? Try this for your spiritual and economic satisfaction. Help a child or a group of children or do something to bring your community to a more helpful realization of the value of the child to the community and of its duty to children.

Two facts stand out large to every man who looks about him: the value of preventive measures in medicine, in education, in social life; and the easy, conventional neglect of children in our community use of such measures. You cannot greatly help the world forward by any gift of a reasonable sum of money to be spent for grown people nor by any reasonable effort to "reform" society; but you can help it enormously by making it a better place for children to grow into normal maturity. New Zealand, for instance, is so far in advance of the United States in its State care of children that a child born there has a far better chance to survive and to grow up a healthful man or woman. In fact, the most hazardous part of American life is infancy — the most dangerous thing is to be a baby. The farther we go, too, in our exact knowledge of the causes of human breakdowns, physical and moral, the surer it becomes that the primary reasons act very early in life and the surer it becomes that most of them are preventable.

In answer to an inquiry, therefore, from a man who asks the WORLD'S WORK how he may give ten thousand dollars to help mankind most, this surely is a suggestion worth considering: Do something to help to a better understanding of child-life and its care. Begin, if you will, by helping them to be properly born. Every community ought to have a well-equipped maternity hospital. Help to an understanding of their proper feeding. Help to an understanding of the necessity of a fair start in life — the correction of physical defects, the making sure of sanitary surroundings and habits. We must, as communities, learn all these things anew. There is now knowledge enough to steer the new-comers into our world of diseases and deficiences into a very much more vigorous life than any generation of men has yet enjoyed.

And, if you will take the trouble to inform yourself of what has been clearly proven, you can find ways to bring the practice of child-rearing to a much higher level of safety and efficiency, both by private and by governmental action. We have pursued our extreme individualistic course of life and Government so doggedly in the United States that other and older countries have far outstripped us in apply-

ing this knowledge. The city or the town or the county or the state in which you live has responsibilities and duties to its children that it has not assumed. Wake it up!

And, if you are hesitant about the right deed to do to make this Christmas worth while, look into the hospital near you or the public school or the orphanage or into any other institution where children are born or cared for; and you may learn the most helpful lesson of your life.

At any rate, if we should all make this a Children's Christmas, not merely by giving toys and harmful confections, but by taking up the study of child-life in the light of all new knowledge and of our quickening responsibilities to it, many a defect might be removed and many a misfortune to come might be averted. The world to-day reflects the wisdom and the ignorance of the adults of our own childhood. The world to-morrow will be measured by the same rule; and there is a chance for more rapid advance in human happiness by applying what we have learned about childhood than in any other way whatsoever.

ABOUT "YOURS TRULY"

ONE of the organizations to promote business efficiency is attacking the waste of time and work caused by using "Dear Sir" and "Yours truly" and such phrases at the beginning and at the end of letters; and it reports that one business house estimates that it spends $6,000 a year in requiring its typewriters to use these conventional phrases. Should we not all save by omitting them?

Of course men would save time also by leaving off neckties and buttons on the sleeves of their coats and many other conventional things. Figure up the necktie bill. There are about fifty million males in the United States alone. Let us assume that half of them wear neckties at least sometimes. If every one of these twenty-five millions have only one necktie a year and that cost only 25 cents — there's a waste of six and a quarter million dollars a year. Waste? Of course it's waste. For a necktie does not keep a man warm.

Follow the matter further. Let us assume that every one of these twenty-five million wearers of neckties consumes a minute a day in tying his tie, you have 365 minutes a year, or more than 6 hours. Twenty-five million times six hours make the appalling total of 150 million hours a year wasted tying ties. You may figure it out for yourself how many lifetimes are thus consumed.

Nor does the matter end here. Consider the number of persons who are engaged in the making and the selling of neckties. If they were all released from this useless labor and were put — well, let us say — to growing potatoes — follow your necktie calculation to the bitter end and you'll presently see your way clear to pay the national debt.

II

Efficiency? Yes, by all means. But let us temper it with common sense and courtesy.

And consider this point of view: Do you enjoy your daily work? So you manage to do it with such courtesy and relish as to make the morning greeting of those who work about you a real pleasure? Or are you merely working with might and main and with the maximum of efficiency and the minimum of waste and without joy, looking to your retirement or to some future time as the period when you will really begin to live? If you do not gather joy as you go along you'll never get it. There is an argument in this for neckties and "Dear Sirs" and "Yours trulies." The point is this: there is a limit to the saving of time by the elimination of the polite conventionalities of life; and real efficiency consists of a well-balanced fare that includes courtesy as well as economy.

A CORRECTION

The Board of Public Affairs of Wisconsin spent a great deal of money and time preparing the charts used in Mr. Stockbridge's article, "The Coöperator's Big Dollar," in the September number of the WORLD'S WORK. Inadvertently they were not given credit for the charts in the caption, and the WORLD'S WORK wishes to rectify that omission.

THE WAY OF A WOMAN INVESTOR

NOT long ago a woman came to the editor of this department to complain that she had been badly used. About four years ago she came into the possession of $10,000, which was all the money that she had ever had in a large block at one time. She wanted to invest it and her first step was to answer all the advertisements offering investments in her favorite daily newspaper. There were six advertisements. In reply to her letters four salesmen came to see her and two banking houses wrote her.

One of the banking house letters she dismissed immediately, because it recommended that she buy some high grade New England railroad bonds that yielded only a little more than 4 per cent. She replied to the other letter — which recommended some 5 per cent. bonds and one issue of an old, established, industrial preferred stock — and said that she was considering buying a little of this kind of security.

The first salesman came from a first class house with a national reputation. He wanted to know what kind of bonds or stocks she wanted. She did not know how to answer his questions, and he was so insistent in asking them that she got a notion that he was trying to find out too much about her business, and so took a strong dislike to him. He hardly got a chance to show her what he had for sale at all.

The second salesman was an officer of a quarry company, which, about two years before, had begun operations in a nearby hill. She knew about the company and she knew one of the officers by reputation. She had therefore a little personal interest in this proposition. When the visitor found this out and discovered that she had a large amount of money to invest, he invited her to go out to the property and go over it. He told her she would find it very interesting and that really the only way to get an idea of the security was to see the property itself. She made an engagement to go the next Saturday.

After that came two others, one of whom she dismissed at once as an unsound adviser. He was offering the stock of a new company that had not yet begun business and her native common sense kept her away from that offer. The other man was quiet and well-dressed. He opened the interview by asking her whether she had ever been an investor before and what kind of securities she wanted to buy. He asked these questions, however, in a way that was not at all impertinent and that gave no grounds for suspicion on her part. She found herself putting him in the position of a counselor and felt, somehow, that she was on pretty safe ground in dealing with him.

He spent a good part of an afternoon explaining to her the difference between stocks and bonds, the broad differences between various kinds of bonds, and even some of the finer distinctions that are so numerous in the securities business. She found herself, quite unexpectedly, deeply interested in these matters, which formerly had seemed to her to be technical and extremely difficult. When, finally, he took up a circular containing a list of the bonds in which his house dealt, she followed his descriptions easily. She found herself gaining a deep respect for the 4 per cent. bonds that she had ignored in the first letter she had received; but she came to the conclusion at the same time that she did not need the marketability and other gilt-edge elements which they presented.

The salesman happened to represent a house that had a comprehensive list, including the bonds of railroads, of public utility corporations, and of a few "industrials." He told her that municipal bonds and gilt-edge railroad bonds were too good for her and that the industrial bonds were not good enough. He advised her to put her money into several different bonds of the middle class, that would yield about 5 per cent. or a little more.

"You will find," he said, "that in this class of investments you will get an as-

sured income, will get it promptly on the day when it is due, and will never have the least bit of trouble either in collecting your income, in getting your principal back, or in being worried about big changes in price. My own house has handled more than $100,000,000 of this class of bonds and we have only twice been compelled to protect ourselves. In those two cases we protected all our customers also."

She asked him to come in again the next Tuesday. He left with her full descriptions of four issues of bonds which he thought were the best he had for her use. She studied them carefully and decided that she did not like one of the issues but did like the others, and that they were the best that had been offered to her.

On Saturday she went to see the quarry. It was a big and striking operation, extremely interesting to watch and seemingly very prosperous. Her guide pointed out to her the staple character of the output and talked of long term contracts with builders and of two substantial municipal contracts, the work on which was under way. He also explained that the bonds of the company were issued only to get money to carry on the operations for these contracts and that they were a first mortgage on the entire property.

The bonds were to yield 7 per cent. and she was to get a bonus of stock with them which would almost certainly pay her dividends in the future. She mentioned that she was thinking of buying some other bonds and she outlined their character. Her companion, somewhat to her surprise, said that in his judgment it would be very wise for her to put half of her money into the quarry bonds and the other half into these other bonds.

"I never believed," he said, "in putting all of my money into any one thing, no matter how good; and even now, when I am actively engaged in this business, I have other investments as well."

That remark, as much as anything else, settled it. She bought $5,000 of the quarry bonds and they and the stock were delivered to her on Tuesday morning. On Tuesday afternoon she had her interview with the bond salesman who had gained her confidence and she told him that she wanted $3,000 of one issue of bonds and $1,000 each of two others. He looked at her inquiringly but said nothing, and she volunteered the information that she had bought $5,000 of the local quarry bonds. She asked him what he thought of it.

"I don't like it," he said, "but I really have no right to an opinion because I do not know the company. If you know the people and have checked up their standing, an investment of that sort is very often excellent for a business man or a business woman or even for a conservative investor like you."

Six months ago that quarry closed down, went into a receivership, and defaulted on its bonds. Lawyers told her that the stockholders would be responsible for some of its heavy debts. She escaped that liability, but found that she could get practically nothing for her bonds.

Her grievance was that her best adviser had refused to give her his real judgment about those quarry bonds. "If," she said, "he had told me the dangers of such an investment I would not have lost half of my little fortune."

A few questions helped to remove the grievance. "Suppose," was one question, "he had turned around and squarely characterized those quarry bonds as an extremely speculative and dangerous proposition, would you not have jumped to the conclusion that he was trying to get the whole of your $10,000? Would it not have resulted in your becoming even more interested in the quarry proposition?"

She admitted that in all probability this would have been the result.

"It must be hard," she said, "to advise people who do not know anything about investments and who are trying to deal with strangers in whom they do not have implicit confidence. I suppose that man did exactly right, but for the last few months I have regarded him as about my worst enemy and have really blamed him more than the quarry people. They have explained to me how they got into trouble and it seems very plausible. Now I have nobody to blame but myself, and there is not much comfort in that."

This incident illustrates the extraor-

dinary disadvantage under which all innocent investors labor if they have no adviser of skill and experience whom they can fully trust. In money matters the very best advice breeds suspicion if it come from people in whom trust is not reposed. Experience has taught the editor of this department that it is better that a new investor lose a few months' interest on money lying idle in the bank rather than try to make an investment by dealing with strangers where the element of perfect confidence is lacking

Confidence is the fundamental of investment. I do not believe in the blind confidence that buys purely on the advice of a trusted counselor, regardless of feelings, knowledge, and facts. If, however, strong confidence in a trained investment adviser is supplemented by the use of ordinary intelligence to gain an equal confidence in the particular security he recommends, the result will almost invariably be good. Of course, no man's opinion is infallible, but nine tenths of the pitfalls of investment will be avoided by the establishment of a confidential relationship with an honest and skillful banking authority and by the use of common sense with which to temper his advice.

"WHAT I AM TRYING TO DO"

TO ORGANIZE THE INTERESTS OF INDUSTRIAL DEVELOPMENT FOR LOCAL IMPROVEMENT AND TO CRYSTALLIZE BUSINESS OPINION FOR COÖPERATIVE ACTION WITH THE OTHER FORCES OF OUR NATIONAL LIFE

BY

HARRY A. WHEELER

(PRESIDENT OF THE CHAMBER OF COMMERCE OF THE UNITED STATES OF AMERICA)

THE personal pronoun has no place in this article, for the purpose of creating the Chamber of Commerce of the United States of America was conceived in many minds. The plans which led up to its organization were made after numerous conferences of many interests directly affected, and the task of developing the working force has been entrusted to a board of officers and directors, thirty in number, all alike active and interested in the successful launching of the enterprise. The interest, therefore, centres not so much in personalities as in the importance of the project and its anticipated influence upon all the commercial and economic phases of our national life.

The Chamber of Commerce of the United States of America is trying to do four fundamental things:

To secure a Federal charter;

To strengthen and perpetuate the source of its own life — local organizations;

To bring the business men of our country into agreement concerning the economic problems which confront us;

To establish coöperation between the commercial and other national factors alike interested in the solution of these same problems.

Federal authority for the corporate existence of the Chamber of Commerce of the United States seems a prerequisite to make it succeed and to provide it with a standing comparable with the National Chambers of other great commercial nations. A charter bill was introduced in the last session of Congress, and the House Committee on the Judiciary, to whom the bill was referred, reported it out for passage with this significant comment:

> There can be no question as to the right and the power of Congress to grant the proposed charter. While we have many commercial bodies in the country, known as chambers of commerce and commercial clubs of one sort or another, they are all purely local in their character, intended only to benefit the particular communities in which they are located.

> We have no organization of a national or quasi-national character, such as it is proposed in this bill to organize. The proposed organization would be Federal in its character, its constituent elements being various commerce bodies throughout the country, so that if the purpose be fully realized, it will be thoroughly national and cosmopolitan. Its possible usefulness is practically unlimited, both as to our domestic and foreign commercial relations. It can and ought to increase greatly the commercial standing and importance of the United States among foreign nations by materially extending our foreign trade and by creating a higher standard of business ethics.

While final action was not taken by the last Congress, it cannot be doubted that a Federal charter will be authorized early in the coming session.

TO STRENGTHEN ITS SOURCE OF LIFE

A National Chamber in our country must have its source, not in individual, but in organization membership. It must embrace, not only all organized lines of business as represented in their great trades organizations, but likewise all communities where chambers of commerce can be formed, and so flexible and democratic must be its organization that the smallest community may find a membership in the national organization not only possible but beneficial. Obviously, therefore, the National Chamber will best perpetuate its own existence, and render the greatest service to the country, by strengthening its constituent membership.

It is a matter of common knowledge that chambers of commerce, boards of trade, and business associations generally have multiplied with incredible rapidity during the last ten years, until to-day not only every city but practically every hamlet has one or more of these civic commercial organizations. Already a new evangelism is appearing, which, through organized and individual effort, is proclaiming the advantage to a city or community in the creation of a local chamber or association of commerce, or in reviving and energizing one already existent.

Next to a religious awakening, the commercial awakening produces the most tangible results for a community in the general betterment of political, social, and commercial standards, but like the religious awakening, unless a leader inspired for his work is found — one who serves for the love of the task and who draws others by personal example to do the same — there is likely to come that period of reaction and of slipping back into the old unregenerate condition from which it is doubly hard to recover.

Many of the organizations have been hastily formed and possess no very fixed purpose or programme. Sometimes a leader is lacking, and sometimes a competent secretary; sometimes the purpose is so narrow and the resources so small as to restrict all effort and failure results for the very lack of nourishment, although the need for existence remains unchanged.

It should be apparent how the Chamber of Commerce of the United States of America, made possible by the existence of this multitude of commercial organizations, may in turn strengthen and perpetuate the source of its own life: By encouraging thorough organization, supported by resources sufficient for the task; by standardizing, in so far as possible, the plan of organization and method of operation; by bringing into the life of every organization that contact with national and international problems which will thrill its members through recognition of the part each community and each individual is playing in the world's work; by articulating all of these independent local forces into a composite force, capable of thinking in national terms and speaking with a national voice; and finally, by elevating the work of the civic commercial secretary to the plane of an honorable and permanent profession, one which our colleges and universities will add to their curricula thus encouraging our young men to educate themselves for the work, as they would for the law, or medicine, or theology, assured that advancement for merit will be certain and inspired by the fact that a highly trained secretary of an active commercial organization holds a place of power and influence exceeded by few in his own community.

The evolution of commercial and indus-

trial life in this country has been so rapid as to be almost unnatural. In such a development innumerable economic problems have arisen, each one vitally affecting some branch of our industrial life, and each needing an abundance of both legislative and common sense in finding a solution that will protect the public at large, and, at the same time, not throttle commercial expansion. Such of these problems as are strictly national must find solution in Federal legislation, and a common agreement must be reached between those entrusted to make our Federal laws, naturally protecting the interests of the people at large, and the united commercial sentiment of the country, whose voice could not, under former conditions, be sounded, for the lack of a single organization representative of all the interests.

It is the purpose of the Chamber of Commerce of the United States of America to impress upon the business mind of the country that special privilege is a thing of the past; that commercial expansion must be had upon its own merits; that the people, while unwilling to do anything to weaken or destroy the industries which they have themselves built up by permitting a tax to be levied in the form of a protective tariff or other privilege, will not and should not be taxed longer than is necessary to firmly entrench our industries and enable them to gather strength enough to withstand foreign competition.

Geographical lines and sectional prejudices must be abandoned in consideration of national economic questions. The regulation of domestic commerce, the method of tariff revision, the encouragement of an American merchant marine, the development of an export trade, the distribution of immigration, the reconstruction of our banking and currency system, the development of our interior waterways as auxiliary to our railroads, the conservation of our natural resources, and the development of our arid areas by irrigation and of our wet lands by drainage, the better protection of our industrial population — upon these, and many other collateral subjects, the commercial interests of the country must come into agreement capable of being expressed as a national conclusion, if Congress is to enact legislation calculated to serve alike and equitably all of the interests which it is in duty bound to consider.

To bring into unity the commercial interests; to encourage the study of these questions from a broad national viewpoint rather than from the local or individual viewpoint; to plan for their solution, not for to-day, but for the future, is the task to which the National Chamber has set itself, and while the development will be slow, the purpose will be maintained.

This is simply moving one step forward after a measure of unity has been established as between the commercial interests themselves. Every subject heretofore referred to is of equal interest to labor and to agriculture, and any legislation which favors commerce against the other two, or favors either of the others against commerce, will injure the whole.

The development of our industrial life has provided the farmer with a home market for his products at higher prices than the world's market, and the value of his land has increased in proportion to the ever-increasing value of his crop. The development of our industrial life has increased the market for labor, and labor was never more highly paid nor so generally employed.

These three great forces in our national life are so interdependent that no economic question can be settled in a manner unjust to either that will not reflect hurt upon them all, and it should be possible, in the consideration of any economic question dependent upon legislation, for these so to combine in discussing a solution that the rights of each shall be cheerfully recognized by the others, and each willing to be reasonable, to give and to take, when necessary, in order that unity of action may be had and our legislative bodies be clearly shown the wishes of all these interests.

To this desirable end the Chamber of Commerce of the United States will freely coöperate in an effort to bring about an adjustment of all honest differences of opinion, that the people in all lines of endeavor may share equitably in the prosperity which would be ushered in by such an era of harmony.

"THE NIGHT BEFORE CHRISTMAS"

ITS AUTHOR AND LEGEND

BY

JOSEPH JACKSON

"'Twas the Night Before Christmas" is the beginning of a poem that vitalized a saint to American children and has added pleasure to the Christmas festivities of millions of people for half a century. Yet "The Visit From St. Nicholas" slipped into print almost unaided and nearly unnoticed; and its author is still hardly known.

ALTHOUGH he lived to be eighty-three years of age, and although he contributed several volumes to his country's literature, Dr. Clement C. Moore, apart from such celebrity as his "Visit From St. Nicholas" brought him, made a very small impress upon his time. Even in the General Theological Seminary of the Protestant Episcopal Church, of which he was a founder and a large benefactor, as well as a Professor of Hebrew and Greek, there remain no traditions, no legends of the man, other than those that would be preserved of any gentle, kindly personage.

Dr. Moore, in the American sense of the term, was born to the purple. He was the only son of wealthy parents. His father, the great Bishop Moore of the Episcopal Church, who once was rector of Trinity Church, New York, and later Bishop of New York, was also President of Columbia College. He assisted at the first inauguration of President Washington, and it was he who administered communion to Alexander Hamilton, after he had received the fatal bullet from Burr's pistol in the historic duel.

Dr. Moore's mother was Charity Clarke, daugher of Major Thomas Clarke, a wealthy retired officer of the British Army, who before the Revolution purchased a tract of land extending from what now is Eighth Avenue to the Hudson River and from the present Nineteenth Street to Twenty-fourth Street, in New York City. There he built a mansion, which he named "Chelsea" after the widely-known army hospital in London.

Clement C. Moore came of parents who gave him all the advantages of gentle breeding, of wealth, and of position in the world. There was nothing for him to do but make the most of them. We are told that his early education was received from his honored and distinguished father. In 1798 he graduated from Columbia College of which his father became president in the year 1800.

In 1816, on his father's death, the "country place," Chelsea, came into possession of Dr. Moore, and from a part of this splendid inheritance he gave a block, from Twentieth to Twenty-First street and from Ninth Avenue to the Hudson River, to the General Theological Seminary of the Episcopal Church. He thus became one of the founders of the institution. When it was opened Dr. Moore became a member of its faculty, assigned to the chair of Oriental and Greek Literature. He retained his chair until 1850, when he was made emeritus professor, a position which he held until his death, at Newport, July 10, 1863.

Dr. Moore had three children, Charity E., born in September, 1816; Clement, born in January, 1821; and Emily, born in April, 1822. The little poem, which he wrote for his children and entitled "A Visit From St. Nicholas," was penned in the Christmas season of the year 1822, according to Dr. Moore's own account, which has been verified by other circumstances.

That the poem obtained so much fame and was taken into the hearts of young and old everywhere is directly due to an accidental occurrence. Among Dr. Moore's friends was the family of the Rev.

Dr. David Butler, who, in 1822, was rector of St. Paul's Church, Troy, N. Y. It appears that the eldest daughter of Dr. Butler, while visiting the Moores, heard the poem and, like everyone else, was immediately charmed. She asked permission to copy it into her album, which request, naturally, was granted. It was her intention to read it to the children at the rectory. The verses were copied from her album and found their way into the columns of the Troy *Sentinel* in its issue of December 23, 1823, and, next to Dr. Moore for its authorship, this unknown benefactor deserves our gratitude for giving circulation to a poem that has been making childhood happier for eighty years.

ITS FIRST APPEARANCE IN PRINT

The editor of the Troy *Sentinel* gave the little waif a position on the third page, and introduced it to the world with as fine and sympathetic a commendation as even its author could have wished. He wrote:

> We do not know to whom we are indebted for the following description of that unwearied patron of children—that homely, but delightful personification of parental kindness — Santa Claus, his costume and his equipage, as he goes about visiting the firesides of this happy land, laden with Christmas bounties; but, from whosoever it may have come, we give thanks for it. There is, to our apprehension, a spirit of cordial goodness in it, a playfulness as of fancy, and a benevolent alacrity to enter into the feelings and promote the simple pleasures of children, which are altogether charming. We hope our little patrons, both lads and lassies, will accept it as a proof of our unfeigned good will toward them — as a token of our warmest wish that they may have many a Merry Christmas; that they may long retain their beautiful relish for these unbought, homebred joys, which derive their flavor from filial piety and fraternal love, and which they may be assured are the least alloyed that time can furnish them; and that they may never part with that simplicity of character, which is their own fairest ornament, and for the sake of which they have been pronounced, by authority which none can gainsay, the types of such as shall inherit the kingdom of heaven.

It has been asserted in print, time and again, that "A Visit From St. Nicholas" was quickly added to the selections in the school readers, but an examination of a large number of the readers printed between the year of the poem's first appearance and 1850 failed to reveal one in which the verses had been copied. The number of newspapers which copied the poem may not now be counted, but it is probable that they were not so numerous as had been believed, for the more the subject is studied the more it became apparent that the wide fame of the poem is the product of the last fifty years.

In the early part of the last century it was customary for the carriers of the newspapers to have printed for their use each Yuletide what was called an Address. Usually this was in verse, and very often the men who carried the newspapers to the subscribers willingly paid some young versifier to write something for it. Horace Greeley made his journalistic hit by preparing an Address for newspaper carriers. In 1830, the carriers of the Troy *Sentinel* used Dr. Moore's poem on their Address, which was a broadside, and, as in this instance they did not have to reward the poet (for he was unknown to them) they employed Myron King, a wood engraver of Troy, to make the now historic picture of St. Nicholas and his "eight tiny reindeer." This address was distributed at Christmas, and, no doubt, brought liberal gratuities to the carriers.

HOW IT BECAME IMMORTAL

When Griswold issued his work on the poets of America, in 1849, he included, among several by Dr. Moore, "A Visit From St. Nicholas." These were reprinted from the volume of poems published by Dr. Moore in 1844, where, for the first time, he acknowledged the little classic as his own. The poem was again reprinted in the Cyclopedia of American Literature, by the Duyckincks in 1855, and in 1862 it was issued again as a separate publication in New York, with illustrations by F. O. C. Darley. From that time it may be said to have permanently entered into its great popularity, for, subsequently, it made its appearance in the school readers and now is almost an annual visitor in thousands of newspapers throughout the country.

In the New York Historical Society they will show you a small morocco covered volume, of a few pages, which contains an autograph copy of "A Visit From St. Nicholas," in the handwriting of its author. Some fifty years ago, the librarian of the Historical Society, Dr. George H. Moore, who was not related to the poet it seems, resolved to obtain for the collection a manuscript copy of the little piece. He managed to achieve this desire through the assistance of T. W. C. Moore, who, in a letter, describes how he came to obtain the copy and what Dr. Moore, then in his eighty-second year, told him of its origin.

There is no need to quote the entire letter, but it is interesting to take a paragraph from it. "These lines," wrote T. W. C. Moore, in forwarding the manuscript, under date of March 15, 1862, "were composed for his (Dr. Moore's) two daughters as a Christmas present about forty years ago, and they were copied by a relative of Dr. Moore in her album, from which a copy was made by a friend of hers from Troy, and, much to the surprise of the author, were published (for the first time) in a newspaper of that city.

"In an interview I had yesterday with Dr. Moore, he told me that a portly rubicund Dutchman, living in the neighborhood of his father's country seat — Chelsea — suggested to him the idea of making St. Nicholas the hero of his Christmas piece for his children."

In his volume of poems, Dr. Moore describes his Christmas piece as a Dutch Legend, and possibly the favor with which the Dutch Legends of Washington Irving were being read about that time may, in addition to the aforementioned Dutchman of the neighborhood, have influenced the poet. The legend, or so much of it as describes St. Nicholas as the kindly patron of children, is indeed an old Dutch legend, but it should be remembered that it was Dr. Moore who presented us with a living portrait of this delightful old party, a portrait which is impressed on our minds. The Santa Claus or St. Nicholas who is a familiar household benefactor wherever children are, is the rotund Dutchman who has been described most minutely by Doctor Moore.

On Christmas Eve, 1911, the vicar of the Church of the Intercession at 158th Street and Broadway, the Rev. Dr. Milo H. Gates, arranged a pretty commemorative ceremony for his Sunday school children, who marched to the grave of Dr. Moore and there laid on the mound a holly wreath. There were about one hundred children in the procession, which set out from the Church of the Intercession and walked to the cemetery three blocks away. Upon their return, the poem, to whose author they had just paid their homage, was recited. Dr. Gates found that the exercises were so cordially received that he intends to repeat the happy idea every Christmas.

THE BARLEY THAT ENCOMPASSED THE EARTH

HOW FORTY GRAINS OF EDUCATED SEED MADE $12,000,000 FOR WISCONSIN AND ARE CARRYING THEIR PROFITS AROUND THE WORLD

BY

FRANK PARKER STOCKBRIDGE

FORTY grains of barley started in Wisconsin and now they and their progeny have encompassed the earth, to the great profit of those who grow it and of those who manufacture it. The reason that these particular grains have spread their influence so far is that they had an 8-year course of sprouts under Prof. R. A. Moore of the Agricultural College at Madison, Wis.

A dozen years ago practically all that was known about barley was that its principal use was for brewers' malt; that it might

have two, four, or six rows of grain to a head; that it was sometimes bearded and sometimes beardless; that some kinds had hulls and some didn't. But when it came to telling the difference between good barley and bad barley — barley that would do all that was required of it and barley that could not be depended upon — nobody knew how. Barley was barley and that was all there was to it, so far as anybody knew.

One result of this failure to discriminate between different kinds of barley was that every kind was grown at once in almost every field, and as the different kinds ripened at different periods after sowing, the farmer was obliged to harvest his barley crop too late to save the early-ripening grains and too early to get a full crop from the later-maturing ones. And when the barley thus harvested got to the malting floor there was another loss. Some of it germinated in two days, some in four, some in six. The best the maltster could do was to let it all soak about four days and stand a loss at both ends.

Wisconsin, a German state, the principal city of which was made famous by its beer, planted three quarters of a million acres to barley every year, with an average yield of less than thirty bushels to the acre. The demand for barley was much greater than the supply — for the reason that the farmers couldn't get full crops.

SENDING THE BARLEY TO COLLEGE

It was, therefore, worth while for Wisconsin to educate its barley to better habits, to improve the barley until it not only could be depended upon to mature uniformly in the field and germinate in a given number of days on the malting floor, but also to produce larger crops to the acre. Professor Moore, in 1899, formed his first barley class. Among the matriculates was some barley answering to the name of "Oderbrucker," which had taken a brief preparatory course at the Canadian Agricultural College at Guelph, Ont. There was some known as "Manshury," which some years before had been put through a short course at the Wisconsin Agricultural College, but had forgotten almost all that it had learned, and there was a miscellaneous assortment of barley from other sources.

For three years these grains of barley were given thorough trials. Each variety was planted and cultivated separately, and at the end of three years the "Oderbrucker," "Manshury," "Golden Queen," and "Silver King" and two or three other groups had proven themselves so far superior in productiveness (object of the early examinations) that all the others were disqualified. Then, in 1902, the real college training of the barley began.

There were exactly 3,000 grains of each variety in the class when the college year opened. They had been selected from the heads that had shown up best in the preparatory course. These 3,000 grains of barley were carefully planted, exactly four inches apart, surrounded by border rows of the discarded grains. Each stalk was given individual and personal attention by Professor Moore and his assistants, and those showing special qualifications as to rapidity of growth, length and uprightness of straw, quick filling out of the head, and general vigor, were placed on the honor roll and designated by rods planted beside them.

Out of a hundred or more plants in each group that took honors during the first year, only twenty were passed. The heads of each of these twenty plants were cut off and carefully weighed. The ten lightest were discarded and the ten heaviest saved for the next year.

The second year's course began with the planting of the grains from these ten heads of each variety in "centgener beds" — plots marked off into squares, in each of which was planted a grain of barley, one hundred grains to the bed, exclusive of border rows. The final examinations of the second year consisted of selecting the ten best heads from each centgener bed and placing each head in a separate envelope for the third year's course, which was a duplicate of the second year's, centgener beds and all, the ten best heads from each bed being advanced to the fourth year.

Along with this testing out of individual grains of barley for productiveness, quality of straw, rapidity of growth, etc., careful tests had been made up to this point of

the different varieties as to uniformity of the period of ripening and of germination in the malting process. By the beginning of the fourth year all the 2-rowed and 4-rowed barleys, the hulless and the beardless varieties, had been eliminated because of defects in one or another of these qualities, and the classes for this year were limited to six varieties of 6-rowed, bearded barley.

While the fourth year tests were under way, a young man from the academic department of the University called on Professor Moore and said he wanted to know all there was to be known about barley. He was going to take charge, eventually, of his father's business, which was that of manufacturing "pearl barley" — the barley you buy in the grocery to use in soup, and which has been put through a process of hulling and polishing. This suggested to Professor Moore some tests which had not theretofore been thought of.

"Please find out from your father what qualities in barley best adapt it to the 'pearling' process," asked Professor Moore, "and ask him, what special difficulties he has to overcome in the barley he now gets."

The student brought back the surprising information that about 20 per cent. of the barley bought in the open market turned blue in the pearling process, and these discolored grains had to be picked out by hand at considerable trouble and expense. Professor Moore sent samples of the six varieties remaining in his classes to be tested as to their "pearling" qualities, and the result was another surprise. Every grain of two varieties turned blue and not a single grain of the other four kinds was discolored. Unintentionally, the process of education and selection had accomplished the very result desired. The two varieties that turned blue were discarded, and the fifth year began with "Oderbrucker," "Manshury," "Golden Queen," and "Silver King" the sole survivors. A square rod was sown with each of these. The sixth year there was enough seed, selected from the best heads of the fifth year crop, to sow a tenth of an acre. The seventh year an acre of each was sown and the eighth year twenty acres.

Here was a seed supply that needed a thousand acres to be properly utilized, and the University had not enough land on which to carry the test farther. To throw such a comparatively small amount of seed into the open market, however, would mean that it would inevitably become mixed with poorer barley and rapidly lose the valuable characteristics that had been bred into it. What was needed was an organization having limitless acreage under its control, that could take the crop from the University's twenty acres and from it grow seed enough to supply the whole state. Professor Moore had such an organization ready for this work of growing a seed crop.

A SEED SPREADING ORGANIZATION

Very soon after beginning his experiments in the improvement of seed grains — for alongside the barley classes he had been conducting similar work with corn, winter wheat, oats, rye, and latterly buckwheat, soy beans, and field beans — he had foreseen the ultimate need of such a seed-growing and seed-distributing organization; and in 1901 he had formed the Wisconsin Agricultural Experiment Association, with a nucleus of a few graduates of the "short course" in the Agricultural College — practical farmers, every one of them, and intensely interested in the problem of better seed.

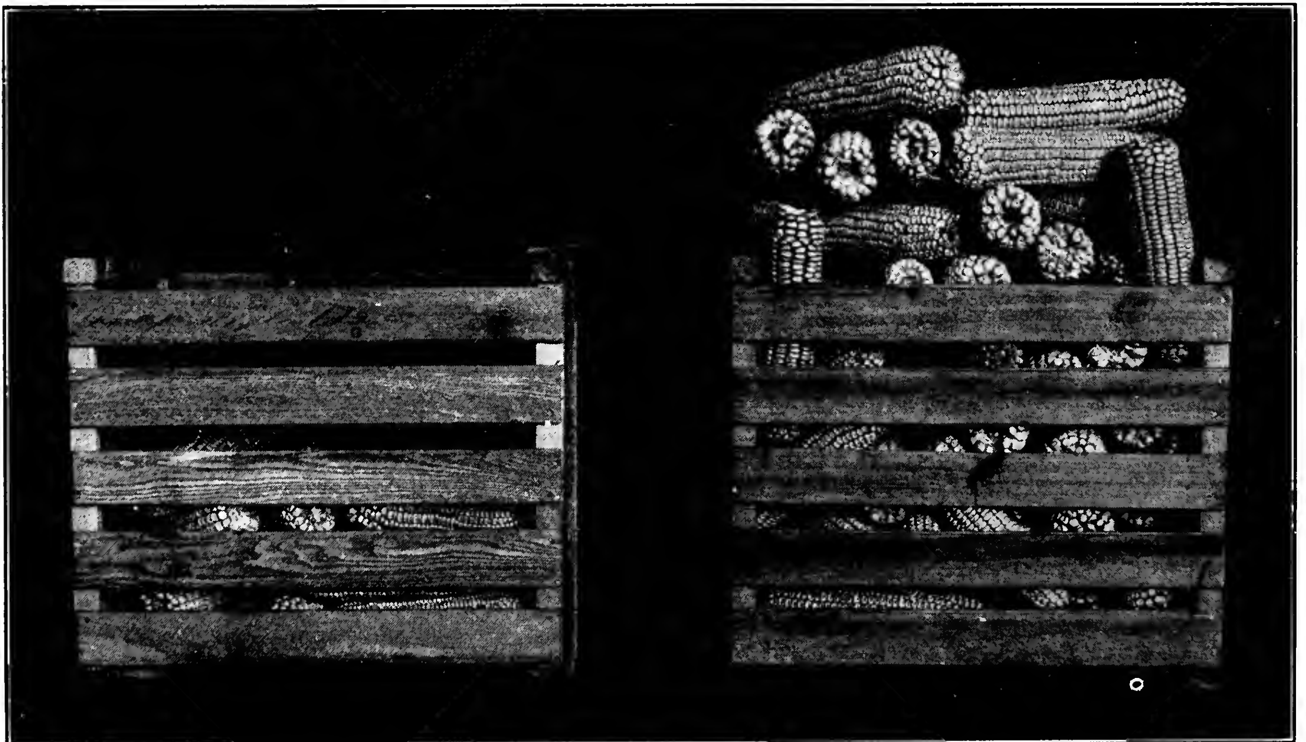
The Association grew rapidly. As soon as any variety of grain was demonstrated to be better than other kinds, even though its "education" had not been completed, Professor Moore had the members of the Association supplied with samples for seed purposes, the members agreeing to plant and cultivate them under careful test conditions, to make detailed reports of results and to unite in growing for seed for sale only the varieties that proved the best. Thereby, long before the barley had reached its final form at the University, Oderbrucker and Manshury grains that had been developed under test conditions were being grown throughout the state in commercial quantities by the members of the Association; four varieties of corn that had been developed at the University were also being produced for commercial

THE MAN WHO GAVE BARLEY A COLLEGE EDUCATION

MR. R. A. MOORE, PROFESSOR OF AGRONOMY OF THE UNIVERSITY OF WISCONSIN, WHOSE EXPERIMENTS DURING EIGHT YEARS GAVE TO THE WORLD THE MOST PROLIFIC AND MOST UNIFORMLY GOOD BARLEY NOW GROWN, AND ADDED MILLIONS OF DOLLARS TO THE VALUE OF EVERY YEAR'S CROP

seed; and the other grains were proving their worth in increased productiveness. The Association's experience demonstrated the superiority of the Oderbrucker barley over the Manshury by an average of five bushels to the acre — as great an advantage as the Manshury had shown over common barleys.

In this way "selected Oderbrucker" barley, also known as "Wisconsin Number 55" became the standard. Several varieties of corn had also developed reputations in this way and were beginning to supplant other less productive varieties among corn growers throughout the Middle West. The "Golden Glow" (Wisconsin Number 12) and "Silver King" (Wisconsin Number 7) had had about seven years of college training and were already close to being the standard yellow and white corn, respectively. Members of the Experiment Association who had been concentrating upon growing these grains for seed had learned the difference between selling corn for feed, even at eighty cents a bushel, and selling it for seed at $3 a bushel. Seed barley at $1.25 a bushel was a much more profitable crop than barley for malting at sixty-five cents. So the members of the Experiment Association, nearly 1,500 of them by this time, welcomed with enthusiasm Professor Moore's proposal to take the barley crop of 1909 from the University of Wisconsin's twenty acres and increase it until there should be enough of this new strain to plant the entire barley acreage of Wisconsin. And the new barley — the barley that had had a college education — was named "Wisconsin Pedigreed Barley."



A DEMONSTRATION OF THE VALUE OF GOOD SEED

THE CORN IN THE BOX TO THE LEFT GROWN FROM ORDINARY SEED: THE CORN IN THE BOX TO THE RIGHT GROWN FROM SELECTED SEED, SHOWING THE BETTER QUALITY OF THE EARS AND THE PROPORTIONATELY GREATER PRODUCTION OBTAINED BY CAREFUL SELECTION

One thousand members of the Experiment Association each planted a batch of pedigreed barley in 1910. Practically all the crop was saved for seed, and in 1911 every member not only put all the acreage he could spare into pedigreed barley, but supplied seed grain to as many of his neighbors as would agree to plant, cultivate, and harvest it under conditions which would make contamination with worthless grains impossible. Thus, when the barley crop of 1911 was harvested, there was enough pedigreed barley on hand not only to plant the three quarters of a million acres which Wisconsin devotes

annually to this crop, but to furnish a considerable proportion of seed for the rest of the world. And the rest of the world learned about the new barley very quickly indeed. It was the first barley that the maltster had ever been able to depend upon to germinate uniformly without loss. It was the first barley that farmers had been able to plant with the certainty of a full crop running upward of thirty-six bushels to the acre and all ripening at the same time, so that there was no loss in harvesting. And, incidentally, it was the first barley that the millers could use for "pearling" without any of the grains turning blue.

One day in June, 1912, I dropped into Professor Moore's office. He was busy at the telephone. As he turned away from the instrument to greet me, he smiled.

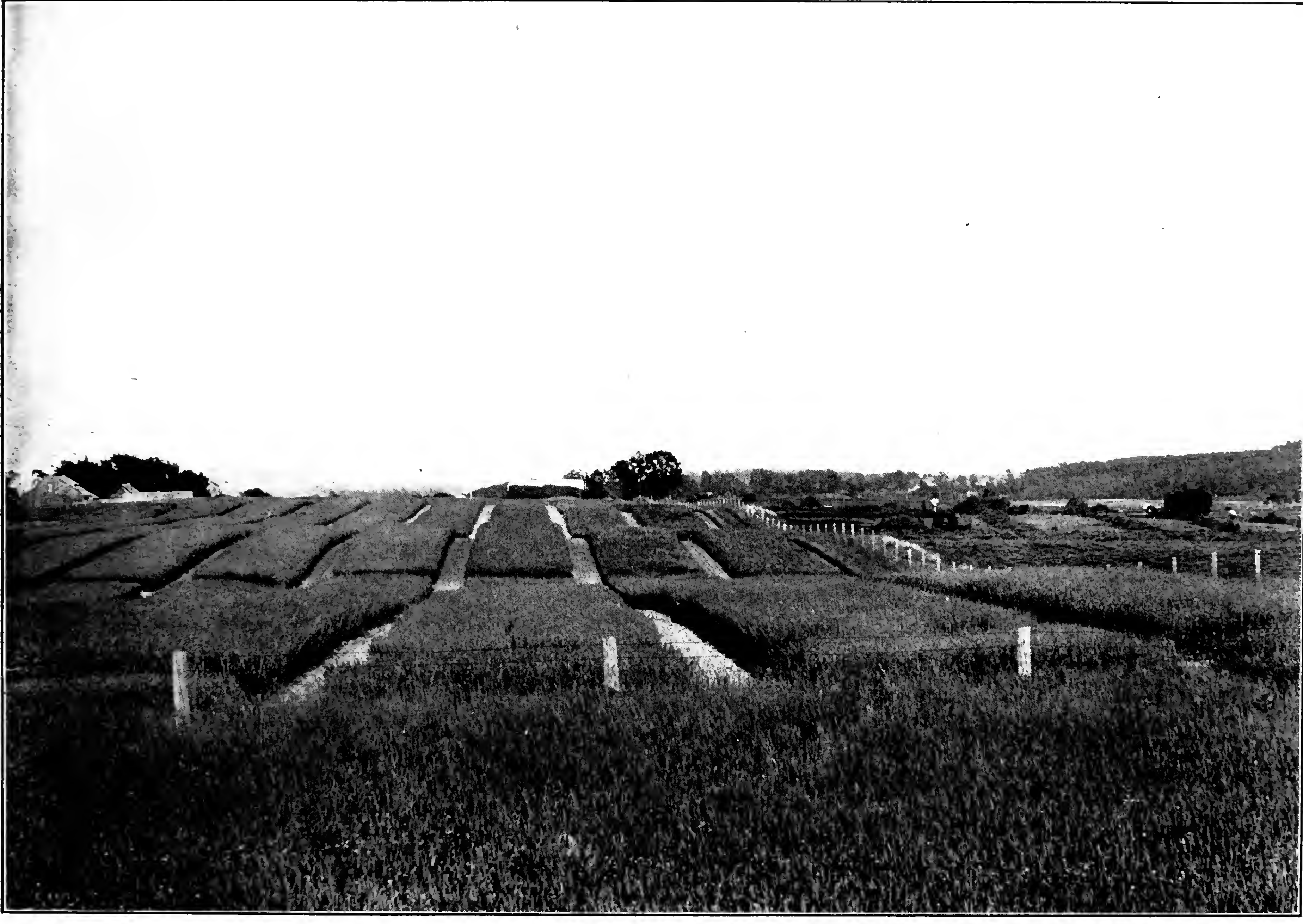
"That was an order for 20,000 bushels of Wisconsin Pedigreed Barley to go to Japan," he said. "I keep close track here of just what seed grains the members of the Association have on hand, and that order will be in the hands of three men, who between them can fill it, at once. Our pedigreed barley has already made headway in Russia, Germany, and several other countries.

This one year's crop of pedigreed barley will plant the whole barley acreage of the United States next year, and next year's crop will suffice to furnish the entire world with barley seed. Of course, it will take a little longer before the farmers of all the world wake up to the advantage of using pedigreed seed, but it will not be long before the descendants of the few grains of 'Oderbrucker' barley which I got from the Canadian Agricultural College in 1899 will be practically the only barley under cultivation anywhere in the world.

"And this is how it translates into dollars and cents. The average acreage in barley in Wisconsin has been 744,600 for the last five years. The average yield has been around thirty bushels an acre. The average yield of the Wisconsin Pedigreed Barley is thirty-six and a half bushels to the acre. This means a difference of more than 18,000,000 bushels in Wisconsin alone, and at the average price of sixty-six cents a bushel, a gain of $12,000,000 for the farmers of one state on the same acreage. I do not know of

"WISCONSIN NUMBER 55"

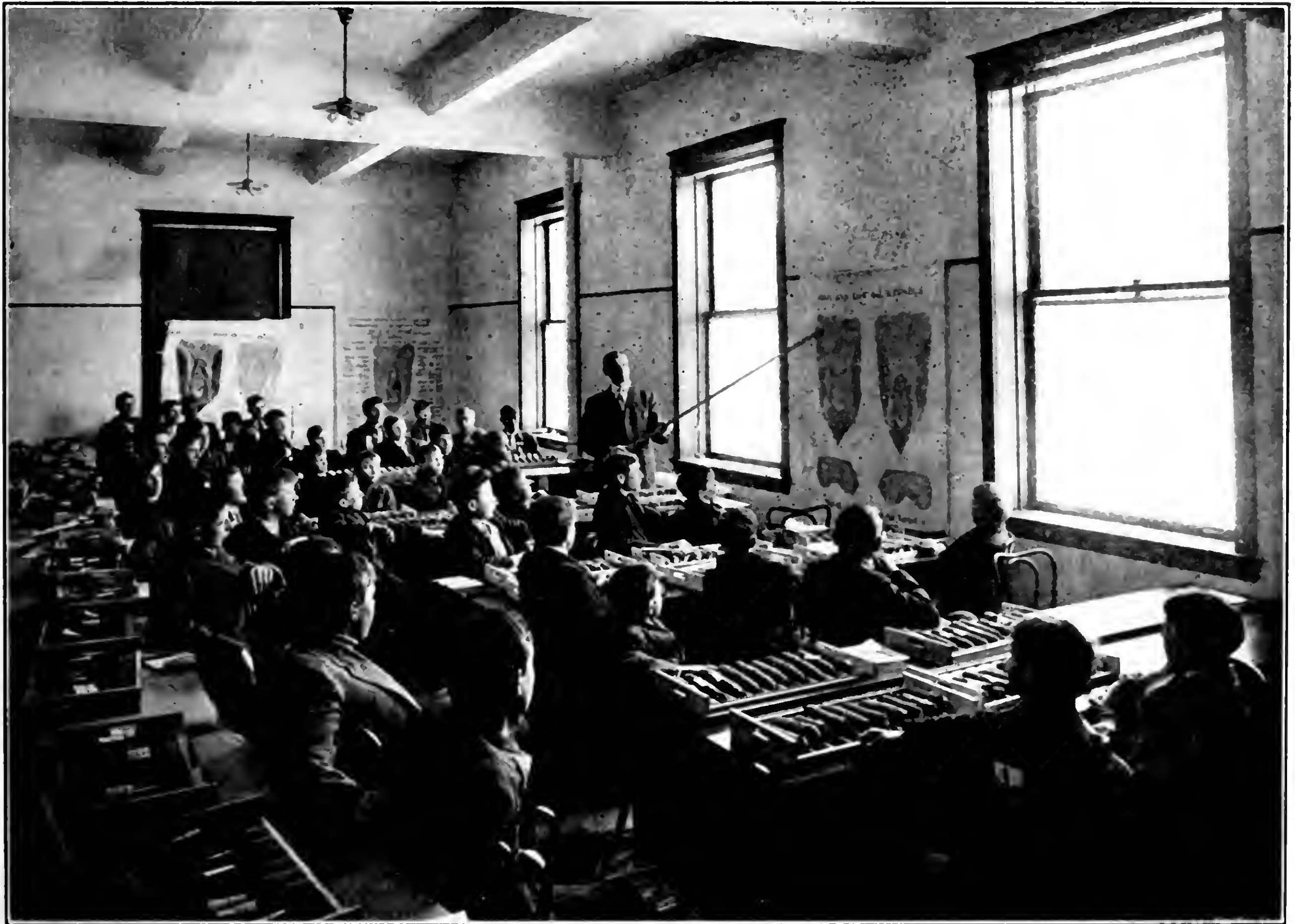
ALSO KNOWN AS "WISCONSIN PEDIGREED," THE BARLEY THAT PROFESSOR MOORE PERFECTED BY SEED SELECTION



EXPERIMENTAL PLOTS OF THE FARM OF THE UNIVERSITY OF WISCONSIN

WHERE PROFESSOR MOORE CARRIED OUT THE PROCESS OF SEED SELECTION AND TRIAL GROWTH THAT PRODUCED "WISCONSIN PEDIGREED" BARLEY

any more striking object lesson in the importance of improving the quality of seeds. Our Wisconsin Number 7 corn, developed here and through the Experiment Association, gives an average yield of sixty-one bushels to the acre, which is twelve bushels above the average of the next best variety and nearly double the average yield of the entire state. We have developed pedigreed rye and pedigreed oats, which will not be ready for Association is rapidly teaching the farmers of Wisconsin the value of better seeds. The Association is organized in county orders, each of which maintains a farm inspector who coöperates with the extension work of the Agricultural College, and the results in the last few years, in higher production per acre, on Wisconsin farms generally, have been very noticeable. The State of Wisconsin gives us a small appropriation for the expenses of the



LADS FROM THE FARMS AT A COLLEGE LECTURE ON CORN

A SHORT COURSE AT THE UNIVERSITY OF WISCONSIN AS A PRIZE TO THE BOYS WHO WON THE SEED CORN CONTESTS OF THE WISCONSIN BETTER FARMING ASSOCIATION

extensive distribution for two or three years yet, but one grain dealer in Toledo has made a standing offer of five cents a bushel above the market price for all the pedigreed rye that he can get as soon as there are commercial crops of it available.

"The big problem the agricultural colleges are trying to solve is how the farmer can get a larger return from his land. Fertilization and crop rotation are essential, but it is also essential that his seeds shall be of the best and most productive varieties, and our Experiment Association, and our members and friends provide prizes for the best exhibits of seed grains at county fairs and the State Fair, and send farm boys from all over the state for a short course in seed testing and grain judging here at Madison during the winter.

"Good soil, intelligent cultivation, and good seed — those are the three essentials for good farming, without all which the farmer cannot hope to advance. And Wisconsin is furnishing the farmers of the world with the good seed."

EXPLORING OTHER WORLDS

ADVENTURES ON THE FRONTIERS OF SCIENCE

FIRST ARTICLE

DISCOVERIES AMONG THE STARS

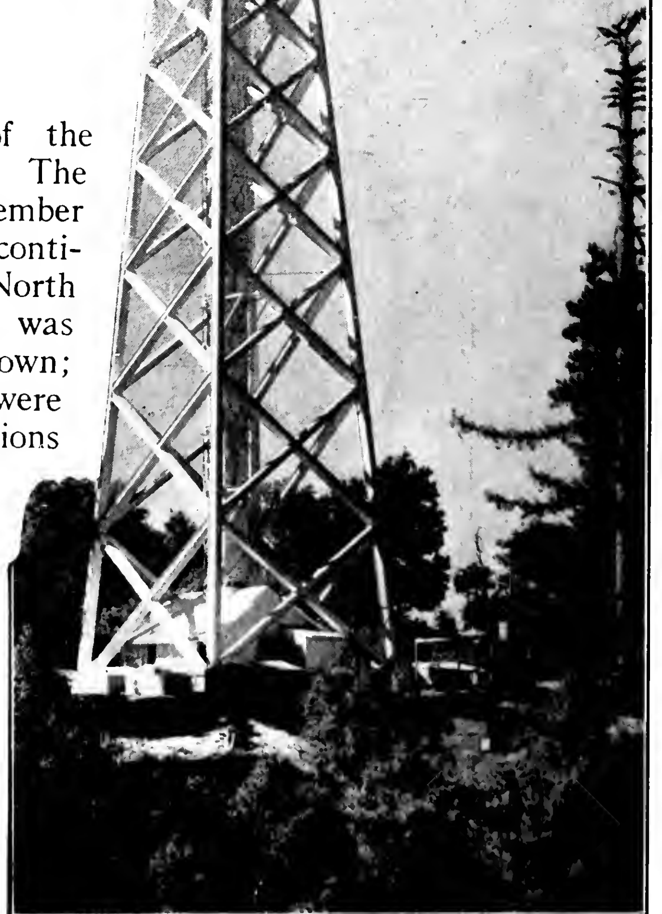
BY

WILLIAM BAYARD HALE

THE work of the explorers of the earth's surface has been done. The generation now living can remember when the centres of all the continents except Europe and North America were a mystery: the Congo basin was unvisited; the source of the Nile was unknown; the Andes slopes and the Amazon affluents were unmapped; Thibet was veiled, and the regions around the Poles were still wrapped in mystery as they had been since the beginning. It was only the other day that news came down from the North that a human foot had trodden the earth's axis there; within a twelve-month the supreme feat has been repeated at the heart of the Antarctic.

The geographical conquest of the earth is complete. For men of imagination and daring, no great prize is left; for no region remains unknown of all the acreage of the earth and its waters.

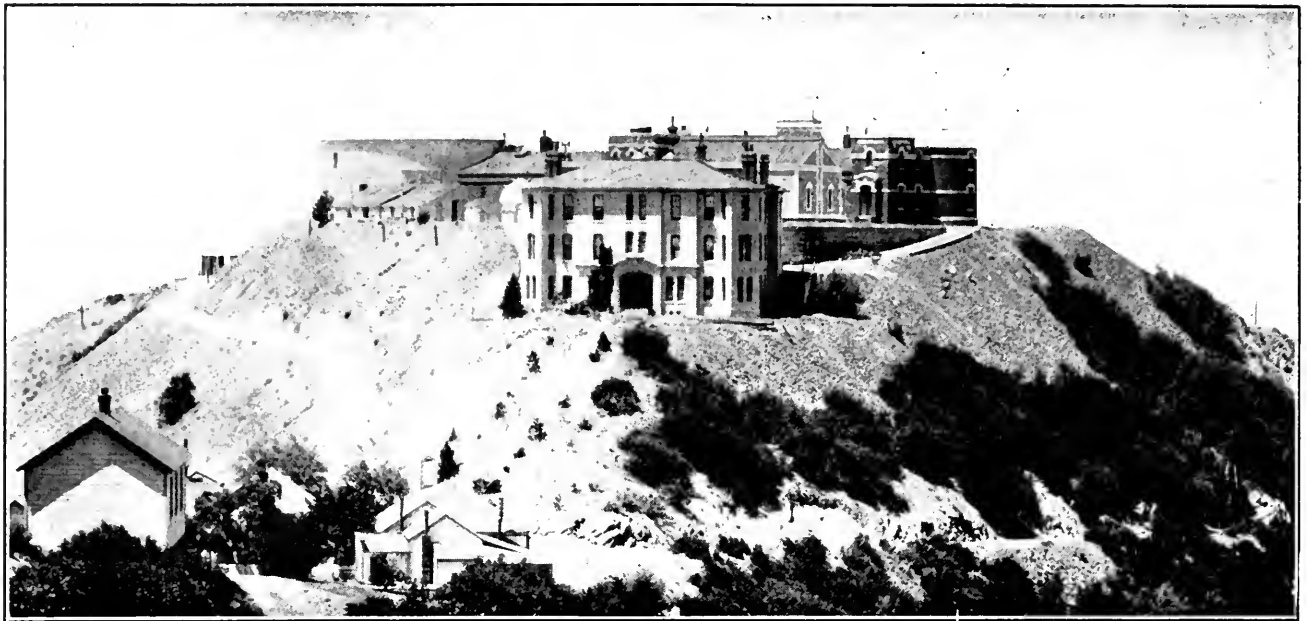
Yet the forth-faring instinct need not



THE TOWER TELESCOPE ON MT. WILSON

A STAGE IN THE GROWTH OF WORLDS

STAR CLUSTERS FORMING IN THE MILKY WAY UNDER THE POWER OF UNIVERSAL GRAVITATION, AN ILLUSTRATION OF THE "CAPTURE" THEORY OF THE FORMATION OF THE UNIVERSE



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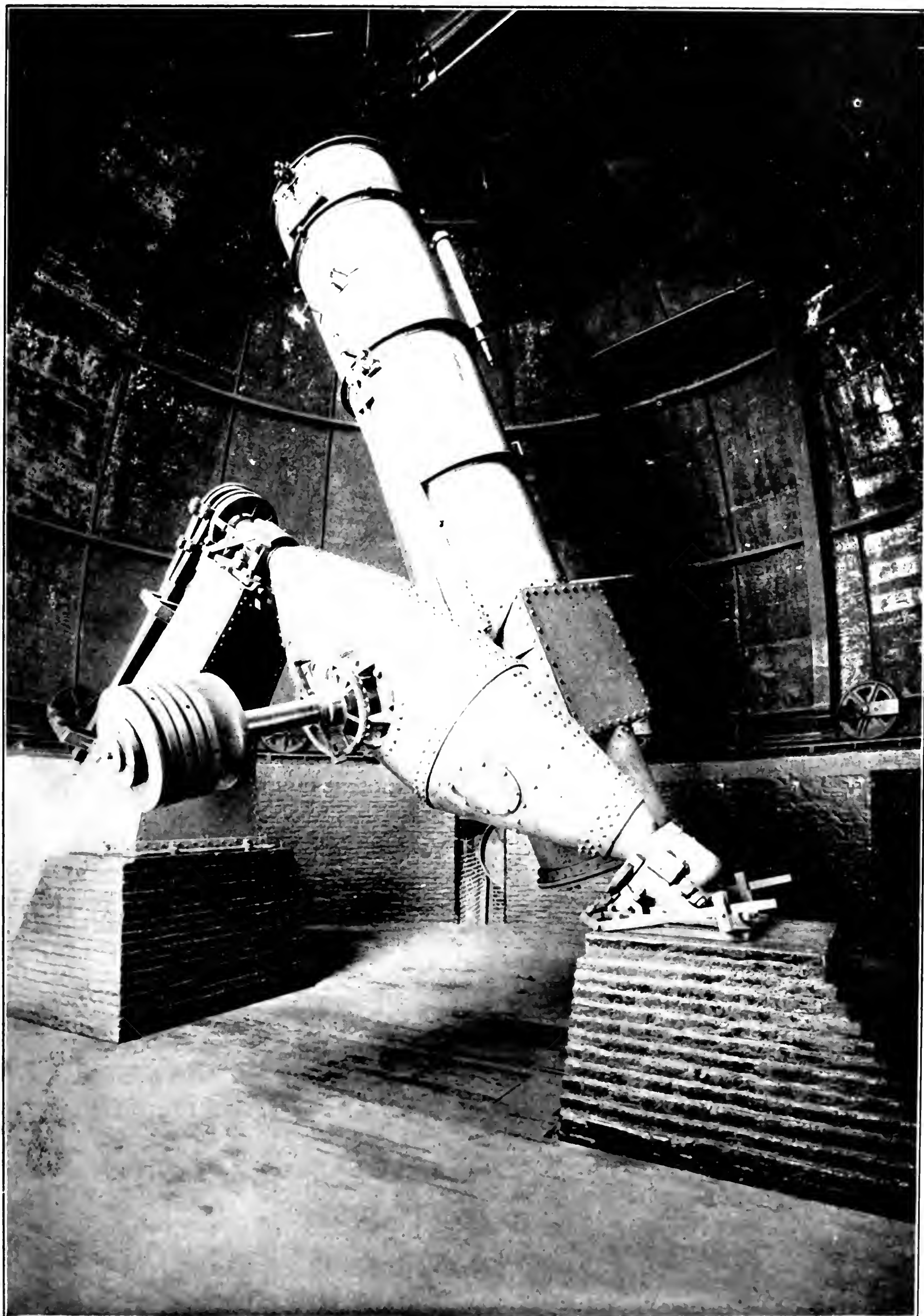
THE LICK OBSERVATORY ON MT. HAMILTON

ONE OF THE MOST SUCCESSFUL AGENCIES FOR THE EXPLORATION OF THE SKY. IT IS USED ALMOST WHOLLY FOR NIGHT STUDIES OF THE HEAVENS

expire for lack of adventures to essay. Though the surface of the earth has now been overrun, there remain plenty of other realms unexplored. Space stretches out to lands which the mind may hope to subdue and the eye and reason to possess, although the foot of man can never tread them. And all about us, without stirring a step, lie the unpenetrated secrets of matter and of mind. It remains to dig into the cave-like recesses of the stuff of which the material world is built and lay bare its ultimate substance. It remains, likewise, to pursue the secret of life, as it retreats within the cells whose structure we can lay open but whose magic virility

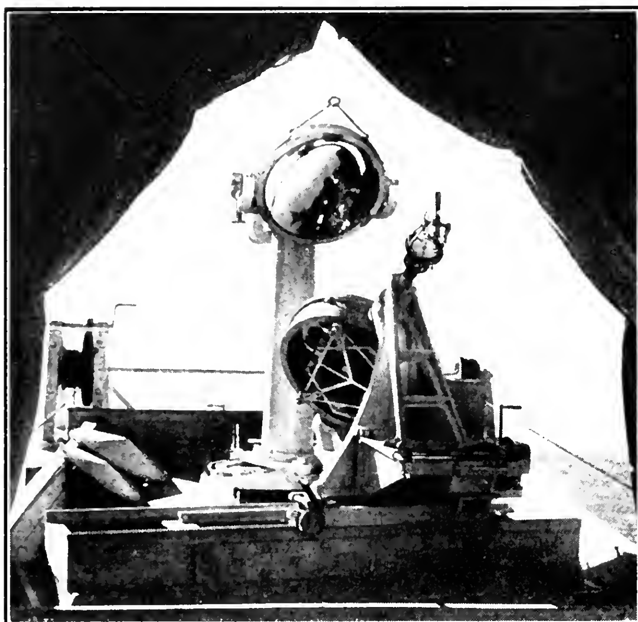
THE SNOW TELESCOPE HOUSE ON MT. WILSON

WHICH IS USED ONLY BY DAY, FOR THE STUDY OF THE SUN. THE CŒLOSTAT AND SECOND MIRROR ON THE PLATFORM REFLECT AN IMAGE OF THE SUN THROUGH THE DOORWAY TO ANOTHER MIRROR INSIDE, WHICH TRANSMITS IT AT WILL TO A CAMERA OR A SPECTROSCOPE



THE REFLECTOR OF THE LICK OBSERVATORY

ILLUSTRATING AN UNUSUAL TYPE OF MECHANISM FOR NEUTRALIZING THE ROTATION OF THE EARTH WHEN MAKING OBSERVATIONS



CŒLOSTAT AND SECOND MIRROR

WHICH CATCH AND REFLECT AN IMAGE OF THE SUN THAT IS STATIONARY. AT MT. WILSON OBSERVATORY

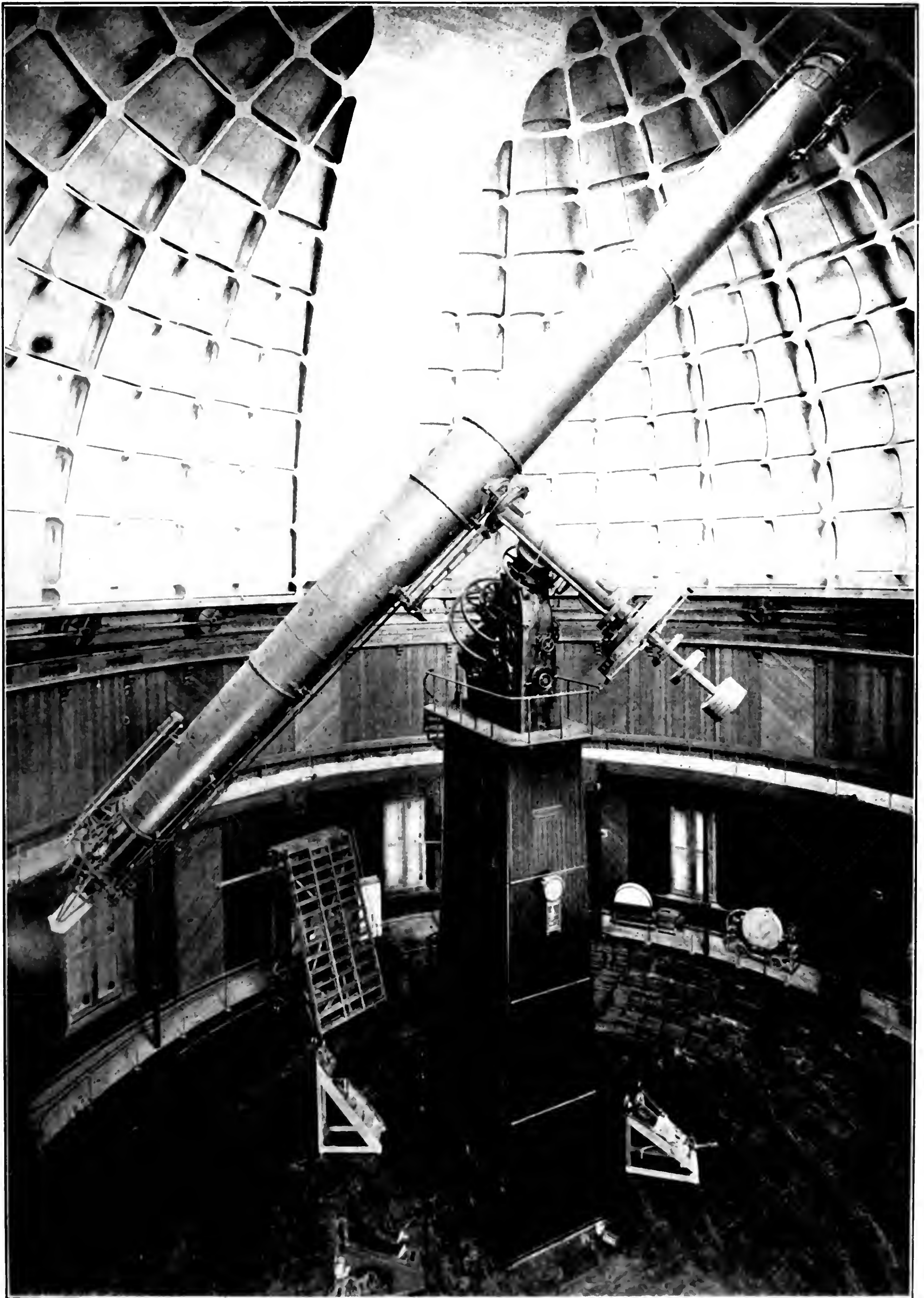
has thus far escaped like a fugitive perfume. It remains to explore the regions of the conscience, carrying the torch of reason and endeavoring to find the eternal ground of our instinct that right is right and wrong is wrong.

Here are adventures which in interest and importance far surpass the mere feat of penetrating jungles or finding a path to a Pole; here are obstacles more tremendous than boisterous seas, treacherous ice, wild beasts, and fever. And these are enterprises from which the gallant men who undertake them will bring home conquests as famous as those of Marco Polo, Vasca da Gama, Columbus, Magellan, Livingston, or Peary.

Are bringing them home. For already a new breed of explorers have been born and are out upon their campaigns. It is the purpose of these articles to tell the world something of their exploits, little heralded in the attempt, and almost unannounced in results, but in fact as romantic as any deeds of men since there has been glory in daring enterprise.

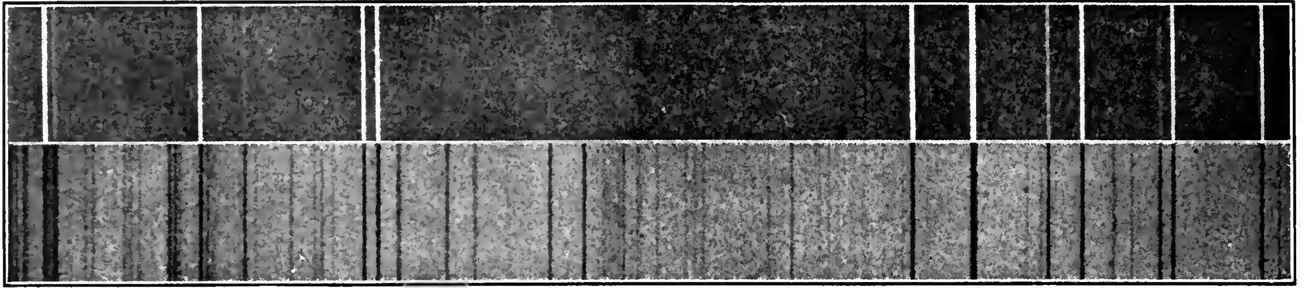
THE 60-INCH REFLECTOR AT THE MT. WILSON OBSERVATORY

THE MOST POWERFUL (THOUGH NOT THE LARGEST) TELESCOPE EVER MADE. IT HAS BROUGHT TO THE PHOTOGRAPHIC PLATE A RECORD OF THOUSANDS OF STARS THAT FORMERLY WERE NOT DISCLOSED BECAUSE OF THE LESSER POWER OF THE OLDER INSTRUMENTS



THE 36-INCH REFRACTING TELESCOPE AT THE LICK OBSERVATORY

REFRACTING TELESCOPES BRING THE IMAGE TO THE EYE (OR CAMERA) BY MEANS OF TWO LENSES: REFLECTING TELESCOPES, BY MEANS OF A MIRROR AND A LENS. THE REFRACTORS PRODUCE THE SHARPER IMAGE, BUT THE REFLECTORS CAN BE MADE IN LARGER SIZES AND PRODUCE AN IMAGE FREE FROM SPECTRUM COLORS

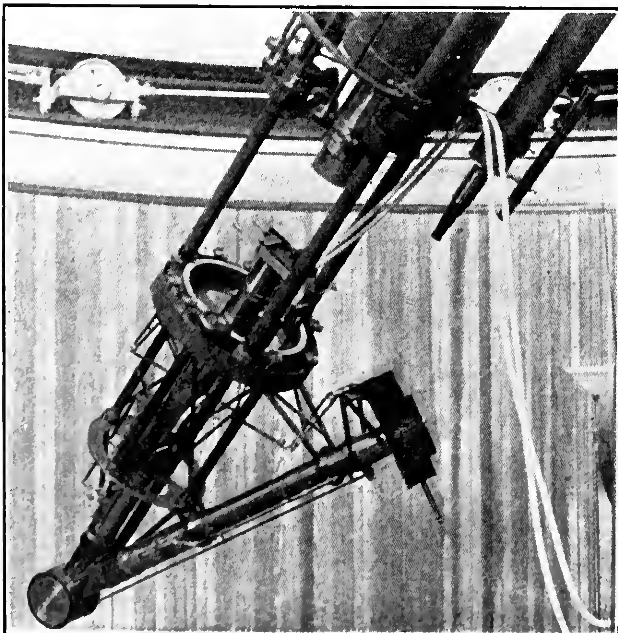


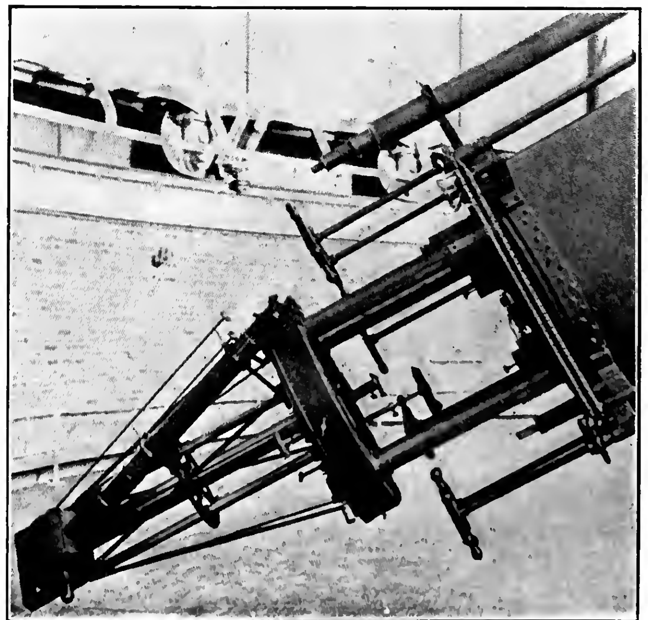
FINDING IRON IN THE SUN

BY A COMPARISON OF THE SPECTRUM OF IRON BY ELECTRIC LIGHT (ABOVE) AND BY SUNLIGHT (BELOW) IN WHICH THE WHITE LINES CORRESPOND WITH THE BLACK LINES

For thousands of years men have gazed up into the sky and wondered what was there. Yet three hundred years ago they knew little more than they did at the dawn of human history. Exploration began only that day in 1609 when Galileo Galilei took into his hand a crude contrivance put together by a Dutch spectacle-maker, and turned it toward the stars. Hans Lippershey had furnished the means of penetrating into the untraveled regions above. The first explorer discovered the spots on the sun, gazed at the landscapes of the moon, and brought back the news that Jupiter had four satellites. A hundred years later, astronomers were exploring stellar space by means of a tubeless telescope, strong enough to measure the diameter of Venus. Another century later, Sir William Herschel, with his 40-foot reflector, saw stars whose light he believed had taken two million years to reach the earth. (In dealing with distances and magnitudes of space, one has to use rather different standards of measurements than those employed on this tiny planet. The celestial yardstick is not 36 inches; it is six thousand million miles — the distance which a beam of light travels in twelve months.) At the beginning of the present century, scores of observers have at their command great instruments through which they can travel to points distant, say, five million light years. Galileo's spy-glass stands to such a telescope as the Lick or the Yerkes refractor or the Snow reflector much as a canoe does to a *Lusitania* or an *Olympic*.

But high powered telescopes, of varieties suited to many different tasks, constitute only one of the advantages with which the



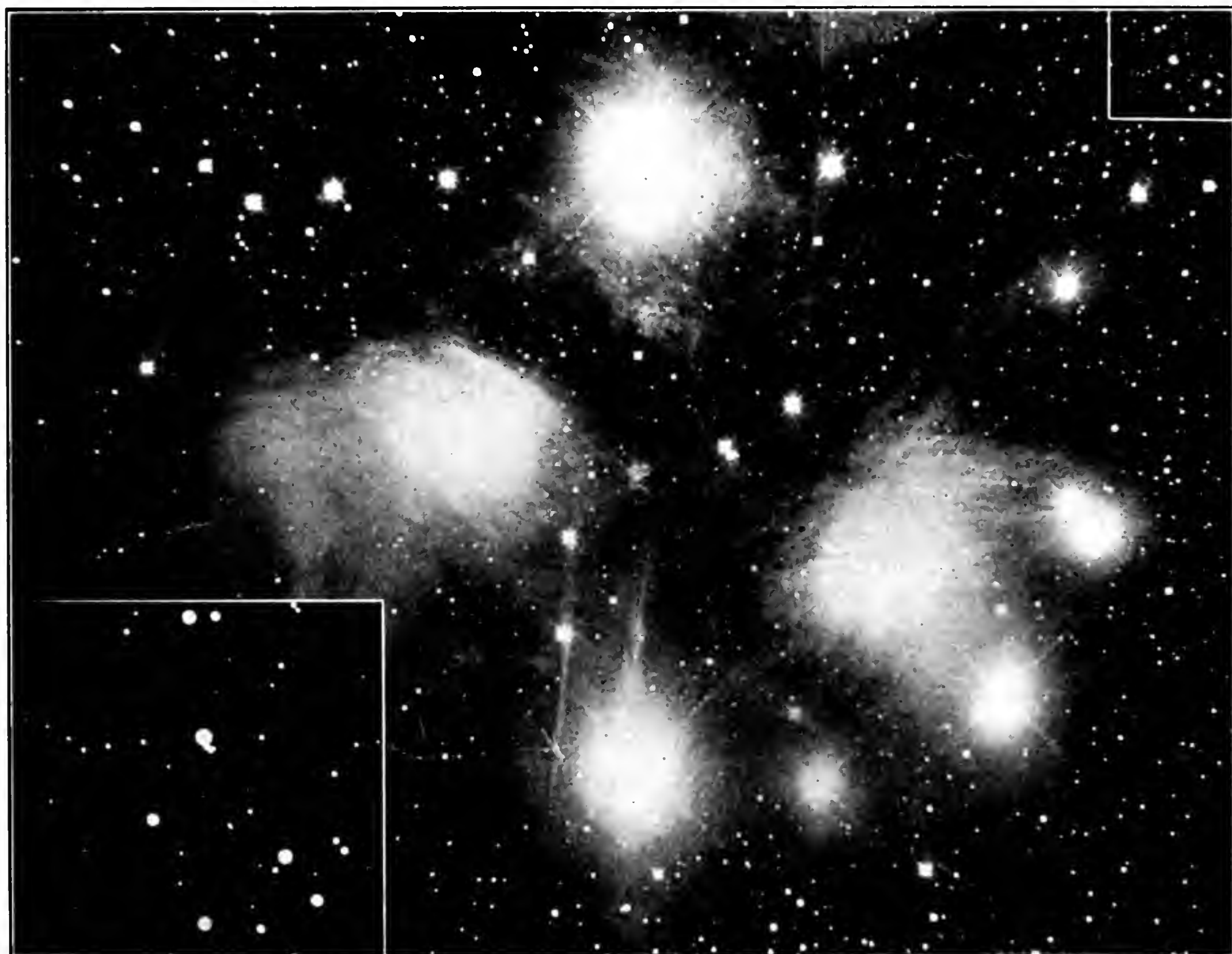


INSTRUMENTS FOR THE STUDY OF THE CHEMISTRY OF THE HEAVENS

THE SPECTROHELIOGRAPH (LEFT) WHICH PHOTOGRAPHS THE STRATA OF THE SUN'S ATMOSPHERE, AND THE SPECTROSCOPE (RIGHT) WHICH ANALYSES THE CHEMICAL ELEMENTS OF THE OTHER WORLDS AND SHOWS THEIR AGE AND THEIR DISTANCE FROM THE EARTH

astronomer of to-day is equipped. He has measuring instruments of what to the outsider seem impossible accuracy — the micrometer, the bolometer, the photometer; he has, for most of his work, substituted the more sensitive plate of the camera for the retina of his untrustworthy eye; he has such ingenious instruments as the spectroheliograph, with which he photographs the sun's atmosphere at different strata; and above all he has the spectrograph, the most wonderful instrument that the human brain and hand have yet created, the most resourceful and intelligent scout that ever accompanied an expedition.

It is no wonder that in the last decade the pioneers of a New Astronomy have pushed the frontiers of knowledge far out in the wilderness of worlds. They have discovered a thousand new facts, exploded not a few old beliefs, exposed the impossibility of many old theories (La Place's Nebular Hypothesis, for instance), and brought us face to face with hitherto undreamed of phenomena — some of them bewildering, indeed, but more of them of enthralling interest and importance in the light they throw on the nature, structure, and machinery of the universe.

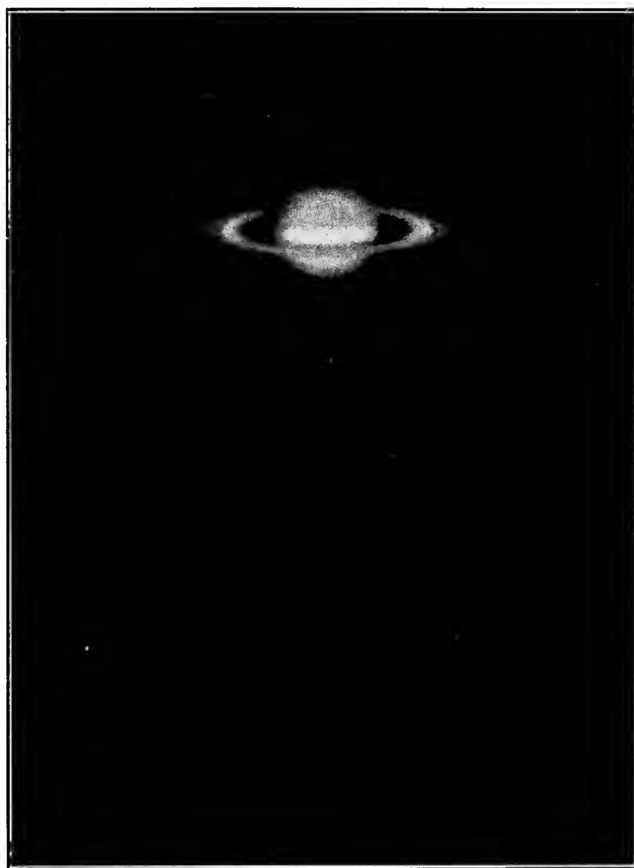


A COMPARISON OF THE POWER OF TELESCOPES

THE PLEIADES AS SEEN THROUGH AN ORDINARY TELESCOPE (UPPER CORNER), THROUGH THE 40-INCH REFRACTOR AT THE YERKES OBSERVATORY (LOWER CORNER), AND THROUGH THE 60-INCH REFLECTOR AT THE MT. WILSON OBSERVATORY

An inventory of the familiar objects in the sky gives us a list of suns, nebulae, planets, moons, comets, and meteors. Closer investigation greatly expands the variety of these objects. We find that the suns are of many types; that they vary widely in brightness and in color; that many are double, or triple, or are associated in other multiples. We learn that the celestial masses differ greatly not only in size and color, but in density. Few of the visible ones are solids. Jupiter is little

more than a seething fluid; Saturn might be described as a globe of gas. Yet these are dense planets. Some of the luminaries have the consistency of ashes; others are perhaps agglomerations of loosely heaped rocks; others are like vast clouds of vapor in which each atom is separated from its nearest neighbor by space which it would require light a thousand years to travel. The specks of dust floating in the earth's atmosphere constitute a solid mass in comparison with the majority of the objects in the sky. We learn that the nebulae are not all unformed clouds; that most of them are beautiful spirals. We observe a tendency of stars and star systems to cluster, and of some types of nebulae to disperse. We see curious emanations from the sun and singular disturbances going on on its surface. Our attention is attracted by such peculiar things as planetary rings and asteroids. We see stars unaccountably wax and wane; we find that many luminaries have disappeared, and that now and again a new one appears, increases to great brilliancy, and then grows dim again. Finally we discover that space is full of gigantic masses — extinct suns — which thunder unseen on their unlit ways. Full, too, of streams of energy that stretch from star to farthest star — for gravitation is not the only force that upholds the universe. And full, probably, of minute particles of matter constantly pressing in every direction — the cosmic dust.



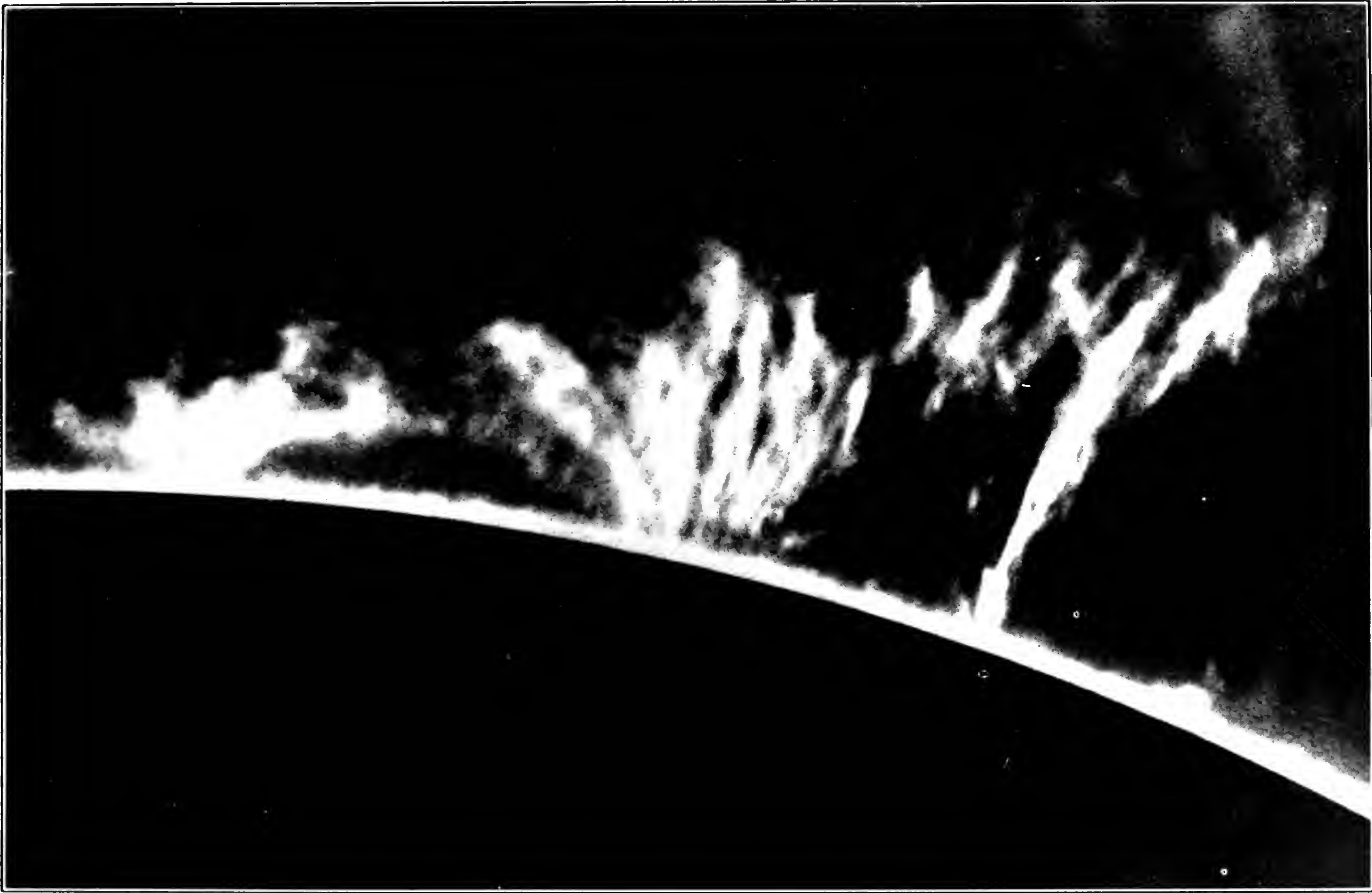
SATURN

AND THE MYSTERIOUS TRIPLE RING WHICH HAS BEEN A BAFFLING SUBJECT OF STUDY AND SPECULATION SINCE HUYGENS DISCOVERED IT IN 1659

One of the most notable discoveries of recent years is that so few stars are what they seem to be to the sight — single suns. Star-gazers have always been puzzled by the variability of some of the brightest orbs. There is one star in the constellation Perseus to which centuries ago the Arabs gave the name by which we still call it — "Algol," el Ghoul — because they observed that it winked, like a demon. We know now that it has a companion, a dark sister, which often passes before it and obscures its light. Algol is one of a pair of double stars, one of them still flaming, the other long since dead, which revolve about each other as the planets revolve about our sun. In most observed cases, both or all the suns are bright and unite in giving brilliance to what we call "the star," though that brilliancy varies as a white, a golden, or a red sun comes to the front.

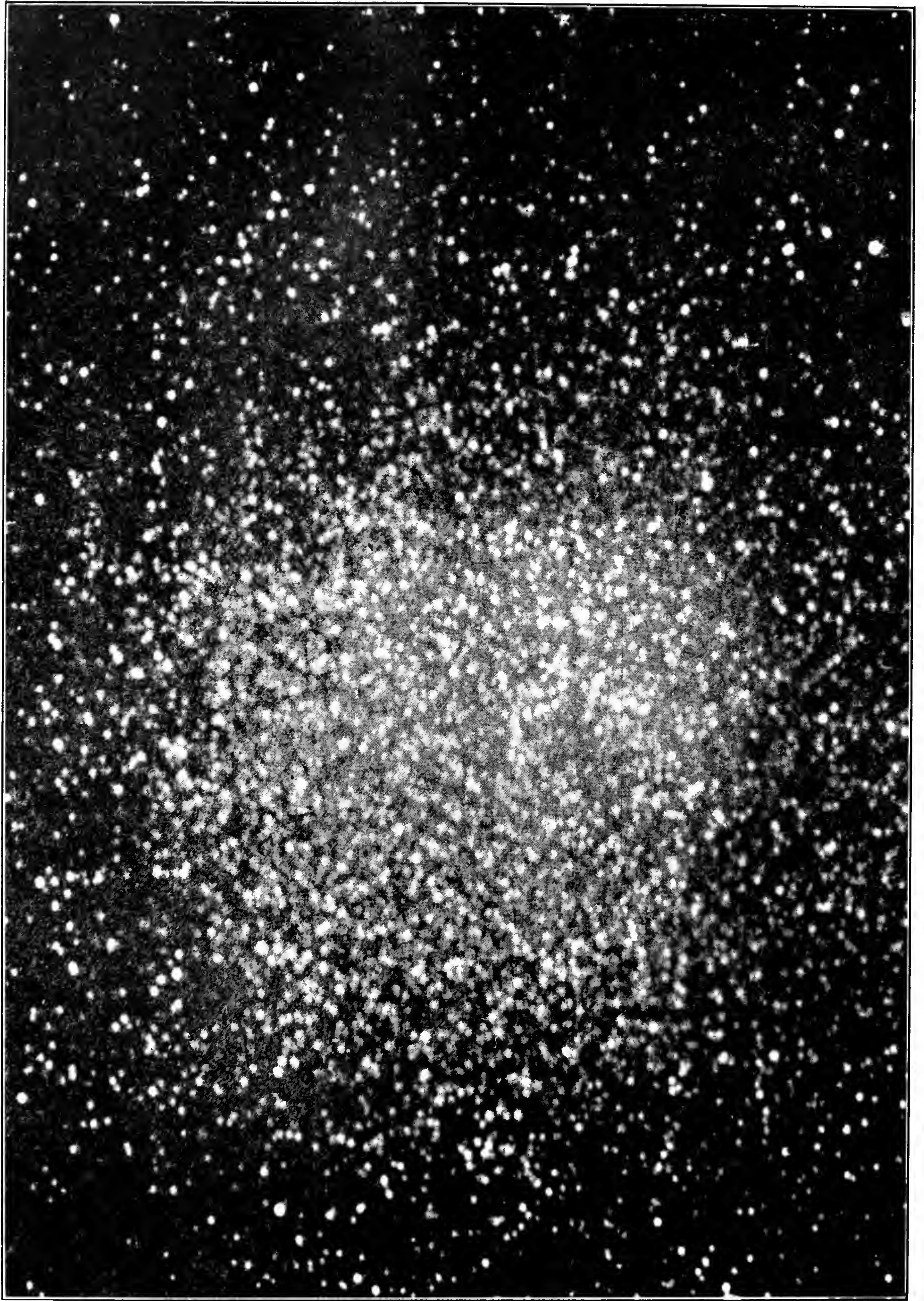
The North Star is double and its brighter half seems to be in turn composed of three suns. Capella has a mate; as they whirl together through space they revolve around each other once every hundred days. The most glorious star in the sky, Sirius, the Dog Star, has a companion twice as big as himself, the pair making a fifty-year revolution. The red star, Antares, has a green companion. Rigel, the star of the left foot of Orion, is a beautiful binary composed of one white and one blue sun.

Since Sir William Herschel first detected the true nature of the compound stars, the indefatigable explorations of astronomers have catalogued 140,000 of them, and the work is still going on, the American, Burnham, being the most successful discoverer in this field. According to estimates



A SEGMENT OF THE CORONA OF THE SUN

FROM A PHOTOGRAPH TAKEN AT MT. WILSON OBSERVATORY WHEN THE SUN WAS IN TOTAL ECLIPSE. THE BLACK SPACE IN THE LOWER HALF OF THE PICTURE IS A PART OF THE MOON. THE CLOUDLIKE MASSES ARE "FLAMES" OF RADIANT MATTER SHOOTING OUT FROM THE MAIN MASS OF THE SUN. THESE RADIATIONS FLY TO THE FARTHEST ENDS OF THE UNIVERSE.



THE GREAT STAR CLUSTER, "OMEGA CENTAURI"

ONE OF THE SWARMS OF SUNS THAT ARE GRADUALLY COALESCING UNDER THE ACTION OF THE UNIVERSAL FORCE OF GRAVITATION

based on work done at the Lick Observatory, Campbell found that one star in five is a binary; others have estimated as high as one in three.

Now it is clear that the double or multiple stars represent a system radically different from that of our sun. In our system there is one big central mass around which revolve a number of vastly smaller bodies, some of them in turn having their own satellites. In the case of none of the multiple suns thus far reliably measured is there any great disparity; in the star Eta in Cassiopeia, one mass is nearly four times as great as the other. But the enormous difference between this sort of an arrangement and that which prevails in the case of our solar system may be gathered when one remembers that our sun is 1,047 times as large as its biggest satellite, Jupiter. In fact, our sun is 746 times as big as all its planets and moons combined.

The common conception of the universe has been of a multitude of suns each with its system of planets. There is not a particle of evidence that a single planet exists in any system except our own tiny one. It is hard to believe that our own is a solitary exception among all the worlds, and it probably is not, but this negative presumption is the sole ground of belief in other systems like our own. It is delightful to dream, as Camille Flammarion does, of earths whose luminaries flood them with golden, green, and crimson light in a glorious rivalry. But the less poetical fact is that small bodies revolving around a pair of suns or a family of suns would probably be thrown into inextricable confusion by the multiplicity of forces acting upon them, would be split to pieces, driven into space, or drawn into the great solar masses.

While we speak of exceptions, a good deal of thought has been given lately to the fact that our moon is a striking exception to the rule of satellites. In the first place, the earth is, so far as we know, the only planet attended by a single satellite. All the other planets which have any attendant at all have two or more. In the second place, our moon is vastly larger in proportion than any other satellite. The moon is actually one eighth of the size of the body around which it rotates. It is really another planet, a twin of the earth. Was it perhaps once one of the asteroids and did it perhaps somehow get out of its old path and join us in ours? This theory — which would have been jeered at a score of years ago — is to-day an accepted belief among at least one school of astronomers.

One idea surviving in the popular mind should be summarily dismissed. It must not be supposed that the modern astronomer spends his time sleeping by day and by night peering through the small end of a telescope. Of course, some observers must be always at the business of surveying the heavens directly with the eye, but vastly the greater amount of the modern astronomer's time is spent in studying photographs, measuring them under the microscope, and pursuing long and laborious calculations. The photographic camera is a better observer than man because its sensitive plate stores up light impressions, records shorter rays than does the retina of the eye, and gives a vastly wider as well as a more enduring picture. Paradoxical as it may seem, an astronomer to-day gazes more often through a microscope than a telescope, and spends more of his time in the chemical and physical laboratory than in his observatory.

When he is in the observatory, the astronomer is likely to be engaged in keeping a particular star at the precise intersection of two crossed hairs on the object-glass of a telescope. He sits by the side of his instrument under a dome open to the sky, in a temperature sometimes below zero. Immense accuracy being necessary, the telescope, with the camera and spectroscope (which during the day have been kept cool by refrigerating apparatus), must be protected even from the heat of the observer's body in the cold night air. But his most fruitful work is in the day-time study of the results obtained by night.

The unaided eye sees differences in the color of the stars. The Dog Star is white. So is Vega. Arcturus is yellow. Betelgeuze, the brightest star in Orion, is red. So is Antares. It took no great ingenuity to guess that the color of a star indicated the stage of existence it had reached; that

as a sun grew older it faded from a brilliant bluish-white to orange. But it required the spectroscope to detect the precise chemical nature of the difference between such a conflagration as that which we call Sirius and that with which the decaying ruddy suns more dimly glow. It is helium that gives the bluish-white suns the supreme brilliance; hydrogen appears in the luminous white of the next class; calcium, magnesium, iron, and other metals in the stars of medium temperature to which our sun belongs; carbon compounds in the redder ones.

Yet conclusions may not be absolutely based on the color of a star. There must be taken into account the possibilities of what we may familiarly call atmosphere — surrounding envelopes of gases or cloud, or Saturn-like rings of dust floating in the radiated light, and the like. In some cases, the light of a star comes to us through a nebula. But we shall see that the spectroscope is able to tell, well-nigh infallibly, the stage of existence which a sun has reached — or had reached when the light we now receive from it began its travels.

Our sun is in the later stages of its life. From afar it appears a golden ball — like Arcturus. Though indeed from that star— 200 light-years distant, and 50,000 times as big as the lord of our day — it is invisible.

How many stars have "gone out?"

Sir Robert Ball sat one night in his room at the top of a tall New York hotel, talking of the hidden things of the heavens. To illustrate a point, he turned off the electric light in the room and, stepping to a window, lifted the shade and, pointing out at the myriad lights twinkling in the windows and on the streets, he said: "I have never seen New York before. If I were as innocent as many observers of the heavens are, I should conclude from looking out of this window that New York consists of a large number of brilliant lights. That is all I see as I look out. But I am perfectly certain that what I see now represents only a very small part indeed of the actual contents of this city. There are, out there before my eyes, thousands of great buildings; they do not happen to glow, and I don't see them.

"When we look up into the sky we see myriads of luminous things; there are thousands of millions of non-luminous masses there which we simply do not see."

People ask, "How was the universe created?"

The fact is the universe was never "created." It is in a process of perpetual creation. It is being made, destroyed, and re-made, all the time. The telescope and the spectroscope bring down to us pictures of parts of it in all the stages of growth and decay. The most fascinating problem of modern astronomers is the searching out of that great process; the discovery of the method of the world machine. It is a question not of what happened once ages ago, but of what is all the time happening.

Ever since men began to study the heavens rationally they have felt that they would be well started toward the mystery of the universe if they could get close enough to make out the constitution and structure of those faintly glowing cloud-like formations which we know as nebulæ. Almost as soon as the telescope came into use, it was directed hopefully at these objects. When Lord Rosse's great reflector resolved several of them into stars, remote and thickly crowded, it was hastily assumed that stronger glasses would resolve them all — there were no true "nebulæ."

But the process of resolution did not go very far; evidently the star-clouds were more distant than had been supposed. Then came the invention of a new instrument with an amazing capability of detecting facts, all sorts of facts, about worlds far beyond vision.

Everybody knows that when a ray of sunlight is passing through a prism, it spreads into a ribbon crossed by bars of color. If the band be examined very closely, it will be found that it is crossed likewise by lines. If the source of light be an incandescent solid, like an electric light filament or the sun, the colors will be continuous and the lines will be thin and dark. If the source of light be a glowing gas, the colors will be *dis*continuous, the dark lines becoming broad and bright. It would be more accurate to say that the rainbow of colors will disappear, the bright tinted lines swallowing up the spectrum.

Every gas gives its own particular set of lines. The glowing vapor of sodium shows two bright yellow lines, invariably in the same position in the spectrum; the vapor of strontium, two red and blue lines; of potassium, a line in the extreme red and a line in the extreme violet; of copper, a green line; of zinc, blue and green lines.

The explanation of the whole phenomenon is easy, but it is unnecessary here. The point of importance for us just now is that "spectrum analysis" affords a means of infallibly determining two things: whether a glowing body is solid or gaseous, and what it is composed of. As we shall see, it does even far more than this. The spectroscope has become a rather complicated machine, but its principle is simple enough. Iron, for instance, gives several thousand lines. Great nicety is necessary to avoid confusing some of these with some of another substance; the spectroscope — or rather the spectrograph, for in practice spectra are usually photographed rather than directly observed — is an instrument for accurately classifying the lines in lights from various sources.

The belief that the nebulæ were enormous aggregations of far-distant stars was general when, one night in August, 1864, Sir William Huggins turned a spectroscope upon a nebula — that in Draco. He looked, rubbed his eyes, and looked again. The spectrum consisted of three bright lines. There was no mistake about it. That nebula, at least, was not an aggregation of stars. It was a luminous gas.

Since that day the spectroscopic exploration of the nebulæ has been one of the chief pursuits of astronomers. At the present moment it is known that vast tracts of the sky are occupied with true "clouds" of glowing gas, swarms of atomic matter, highly attenuated, islands of star-dust floating in the void of space. So vast are they that many of them must cover billions of times the space occupied by our solar system — though they are so extremely tenuous that they appear merely as faint spots of haze against the background of the sky. The pictures revealed by the researches of observers within the decade have proven that the sky is almost entirely spread with faint nebulosity; on every side float vast clouds of star dust.

Of what is this nebulous matter constituted? The spectroscope brings as the most characteristic line a brilliant "green" one, identifiable with that of no other known substance. The discoverers have named the substance "nebulum" — which tells us little about it. The only familiar element detected in the "green" nebulæ is hydrogen. Helium is another gas recorded; "helium" was the name given an element first found in the sun and unknown on earth until Sir William Ramsey found it in 1895. It is a curious fact just learned about helium, that radium slowly transforms itself into it. Helium represents the release of enormous stores of energy at the break-down of radium. Is it possible that this fact has anything to do with the immense amount of helium found in the heavenly laboratories?

Yet it must not be assumed that all the nebulæ are true clouds of star-dust and nothing more. Comparatively speaking, few of them are merely that. Most give continuous spectra — like the sun.

What does that mean? It may mean that stars are embedded in the midst of some of the nebulæ; it may mean that some of them are composed not of gas but of meteors; or it may signify that these nebulæ are merely in the same line of sight with solid bodies that appear in their midst but which are really much nearer or farther.

It is now fairly certain that the solid bodies (whether they be stars or clouds of meteors) are enclosed within the gaseous nebulæ. Take the great nebulæ in Orion; the solid bodies that appear to be in the heart of it, especially the four points of light constituting the well-known Trapezium, have been spectroscopically investigated. They show two of the three gases that constitute the nebula itself (helium and hydrogen) and they show nothing else. Furthermore, the solid bodies are moving through space with the nebula. The same conditions are observed in the case of Pleiades and the nebula in which they are enmeshed. Enough instances of this kind are known to make it certain that many thousand nebulæ do actually enwrap stellar centres, and astronomy has now

become a new science largely through the successful search for nebulous spirals.

There are, as everybody knows, two chief types of telescopes — refractors, in which the light comes to the eye or the photographic plate directly through lenses; and reflectors, in which the place of one lens (the object-glass) is taken by a concave mirror. Briefly speaking, the superiority of the reflector is in the fact that the light is not weakened by passage through the thickness of a glass lens. A great object-glass does not allow all the colors of a ray of light to pass through equally; it gives images distorted by the different refractability of the various colors in light; to the ultra-violet rays (so valuable in photography, though unseen by the eye), it is quite impervious. Pure silver spread on a disk of glass reflects all the constituents of light far more brilliantly and accurately to a focus than the best lens can refract them.

Yet the refracting telescope has, in its turn, so many advantages (such as the ease with which it can be pointed, the comparative ease with which it can be driven in following the star under observation, and with which the accuracy so necessary in astronomical work can be maintained, the convenient position which it allows the observer, etc.), that for many years instrument constructors devoted themselves to its improvement, culminating in these wonderful machines, the 36-inch Lick refractor and the 40-inch Yerkes refractor.

It was with a reflector that Draper in 1881 succeeded in getting the first photograph of a nebula, and with another reflector that Roberts in 1886 secured photographs revealing the spiral character of the Great Nebula in Andromeda, perhaps the most beautiful object in the sky.

With the recent work of Keeler, of Perrine, and of Barnard with the Crossley reflector at the Lick Observatory, of Ritchey with the 24-inch reflector at the Yerkes Observatory, and of Max Wolf at Heidelberg, the exploration of the spiral nebulæ may be said to have really begun. For the first time, the beauty and delicacy of their structure was seen, and their importance as a critical stage of the world-making process realized.

Intimately connected with the existence of nebulæ is the phenomenon of the sudden flashing forth of stars. It is a common thing, though it never fails to startle observers. Three centuries ago, Kepler was astonished, to see in Cassiopeia a star shine forth in such brilliance that it was soon visible by day. In 1876, a new star appeared in the Swan; in 1892, one in Auriga.

The most remarkable recorded instance of the appearance of a "nova" was that afforded less than a dozen years ago, early in 1901, when a brilliant apparition flashed forth in the midst of the constellation Perseus in the northern sky. When Americans were celebrating Washington's birthday that year, a Scotchman named Anderson noticed a star of the third magnitude where the night before none had been visible. Indeed, a photograph taken the night before showed stars down to the twelfth magnitude, but failed to record this. The night following its discovery, the new sun surpassed all other visible stars except Sirius. The night of February 25th, it was the brightest object in the sky — all the world was watching it. Then it began to wane. February 27th it had sunk to the second magnitude; March 6th to the third; March 18th to the fourth, and so on to the twelfth magnitude. In the meanwhile, it discharged into space prodigious quantities of electrified gas.

In August, 1901, on the 22nd and 23rd, Max Wolf made some long photographic exposures for the nova and, developing them, found to his surprise wisps of nebulous matter attending the star. A month later, Ritchey's photographs showed what looked like a complete nebula encircling it in spiral-like curves. Two months later, Lick photographs revealed the emanation uncoiling and expanding. Plates made by various observers up to the following February confirmed the conclusion that the event, whatever it was, that had made the new star blaze out, was producing, as its brilliance waned, the appearance, at least, of a spiral nebula.

Was Nova Persei, and were the others, the results of collisions? Were they the effects of the passage of a dead sun through a nebula? Some sort of catastrophe must

have called forth these sudden conflagrations. Here is one of the new problems with which astronomers are wrestling.

We did not know the distance from us of a single star in the heavens until 1839, when the parallax measurements of Alpha Centauri, which had been successfully made by Thomas Henderson at the Cape of Good Hope, were worked out. The parallax method consists of getting angles on a distant object from two widely separated points whose distance from one another is known. Up to the present time, it has been applied with fair success to about 200 stars, but little more can be done with it. The two most widely separated points which we can reach lie at the opposite ends of the earth's orbit, but the diameter of the earth's orbit affords but a tiny base line from which to shoot angles at bodies so remote that their very light has been millions of years in reaching the earth.

It goes without saying that small results can be hoped for in the exploration of regions where only a few of the least distances are known. Knowing little of distances, we could learn little of the speeds or the directions at and in which the stars are moving.

Now, the spectroscope has another property, perhaps even more wonderful than those we have already noticed:

Any one who has stood by a railway track as a train approached and rushed past must have noticed that the whistle rises in pitch until the train reaches the observer, and then drops. The pitch of the whistle depends upon the rapidity with which the waves of sound strike the tympanum of the ear — as the train comes on, these waves are crowded up; as it recedes, they lengthen out.

In 1868, there came to Huggins the startling idea that light waves from the stars would act in the same way. They would crowd up if the star were approaching; and thin out if it were receding. Just as the approach and recession of a locomotive's whistle records itself on the ear, the course on which a star is moving would affect the sensitive plate of the spectroscope; if the star is moving toward us, the lines of its spectrum would be crowded toward the upper end, the violet end (violet, the high note of the visible spectrum, being produced by twice the number of waves that produce red, the "low note" color.) If the star is going away from us, the lines would fall toward the red end — the "low pitch" end.

Huggins had supplied astronomy with a revolutionizing equipment — a surveying instrument without which it could never have hoped to go far, or to make the roughest map of the regions it travelled. To-day, with the spectroscope equipped with the marvelously delicate "gratings" ruled by Rowland at Johns Hopkins, or Michelson, with 20,000 lines to an inch, it is possible to tell from the position of the lines in the spectrum of a heavenly body whether it is approaching or receding, and at what speed.

And knowing the speed at which many objects are moving — that is, the arcs they are travelling in given lengths of time — we have a new and invaluable set of data from which to deduce innumerable celestial distances.

The advance of spectroscopic study has now given us, with a fair degree of accuracy, the distances of a thousand stars and nebulæ where the other day we knew none. It has given us entirely revised ideas of speed, and, of course, it has betrayed motion where none was expected. It has betrayed other things — many dead suns, for instance. It was by means of the spectroscope that Vogul found that Sirius (and, therefore, also the unseen partner revolving with him), were travelling 26 miles a second away from us and then, a day and a half later, 26 miles a second toward us—rather an accurate time-table to write on the earth for an unseen object millions of miles away. And parallel calculations are now everyday occurrences.

One of the most striking applications of the spectroscope to the survey of speeds, directions, and distances, was one made by the lamented Keeler. The mysterious rings of Saturn were cited by Laplace as a living illustration of his theory of the process by which the planets were thrown off by the sun. The hypothesis required that the rings revolved as if they were solid discs — the outer edge travelling faster

than the inner, just as the outer rim of a wheel travels faster than the hub. Keeler's spectrographs of the rings showed that the lines in their spectrum, passing from the outer to the inner edge, were bent in an increasing degree toward the violet, on the approaching side, and toward the red, on the receding side. That is, the inner ring is moving faster than the outer. Laplace was wrong. Saturn's rings are streams of meteors, following Kepler's law, by which they must move at the speeds at which the spectroscope shows they actually do move.

It is, however, to results far grander that the survey of the heavens at last made possible by the spectroscope now leads us.

It was long ago suspected that the celestial bodies fell into groups; and there was noticed what appeared to be flocks of stars, and great drifting masses. Probably the most amazing work of recent astronomy is the demonstration of the probability within sight of which this article has now advanced.

If one were in an immense crowd of people on the earth, it would not be difficult to tell whether the people were moving and in what direction or directions. But it is a different matter when we are carried on through space, without anything solid and unmoving beneath our feet, in the midst of millions of bodies whose movements are relatively exceedingly slow. Still it is possible, by the aid of the data which celestial explorers have now accumulated and through the exercise of great patience and accuracy, to make out the comparative directions in which we and the stars we see above us are moving. That possibility has been acted upon.

The photographic plates of the star catalogue now records 50,000,000 stars. Within the last eight years there has been a concentration of this immense host with a view to learning whether any general arrangement and movement is to be found in it.

An amazing result has already been attained.

In 1904, Prof. J. C. Kapteyn, of Groningen, announced his belief that the visible universe is not single, but double — that what we behold is not a system of stars but two systems. Since this announcement, A. S. Eddington, of Greenwich, A. W. Bickerton and H. C. Plummer, of Oxford, and T. J. J. See, of the Lick Observatory, have given their concurrence to it. Mr. Eddington, for example, has analyzed the motion of six different groups of stars and he has shown the existence in every case of two sets of curves indicating two paths along which rival star systems are streaming. One stream travels at the rate of seventeen miles a second, the other at the rate of five miles.

The movement of our sun is 13 miles a second toward the region in the heavens now marked by the great star Arcturus — though he is hastening to meet us. The two pointers of the Great Bear are going along with the earth; other stars of the Great Bear, away from the earth. Sirius is in our stream; so are the brightest stars of the Northern Crown; one in the Lion, one in Eridanus, one in Auriga — so, at least, calculates Dr. Hertsprung, of Groningen. Algol is coming with us; so probably is Beta of the constellation Perseus. Arcturus and Vega are coming our way.

At first a scarcely-dared conjecture, the astonishing conception of the two star-streams has now taken its place as the most fruitful working hypothesis in advancing astronomical science. Taking it as a base, the explorers are pushing out to new regions of wonders. Upon it they have built new theories of the formation of the planets, the evolution of suns, the fashioning of nebulæ, the origin and action of the world-machine.

In another article, we shall come to close quarters with these newest theories, which give to the celestial phenomena rapidly sketched as problems in this article, explanations which, if not final, are, at all events, ingenious and fascinating. It is a noble thing that man, denizen of a tiny planet revolving in attendance on an inferior sun, dares even to believe that he can go forth in conquering imagination till he stands in the midst of the whirling universe and surveys, comprehending, the amazing procession of worlds that fill the heavens with glory.

THE HIGH COST OF SELLING

MORE THAN A BILLION AND A HALF DOLLARS OF WASTE IN MARKETING FOOD PRODUCTS — HOW OTHER COUNTRIES HAVE REDUCED THE COST OF MARKETING — THE TREMENDOUS SAVING THAT CAN BE MADE BY CONCERTED ACTION ON THE PART OF GOVERNMENT, PRODUCER, AND CONSUMER

BY

B. F. YOAKUM

LAST year, the products of all the farms of the United States were worth more than 8 billion dollars. This Government figure is based upon values at the farm. It is safe to assume that less than one third of this product stayed on the farm and was consumed there. The farmers, therefore, marketed products for which they received 6 billion dollars.

When those products finally went into consumption, the public paid for them more than 13 billion dollars. It cost 7 billion dollars to distribute six billion dollars, worth of products from the farm to the consumer.

If you ask the average citizen who got the bulk of that money, he will answer without hesitation that it went to the railroads. If you confront him with the fact — easily proven by Government figures — that never in the history of the American railroads have freight earnings from every kind of freight — agricultural, manufactured, merchandise, food, clothing, and all other items — reached the total of 2 billion dollars, let alone 7 billion dollars, he will evade the issue, but never will he admit that he might be mistaken. The total railroad earnings last year from all agricultural products including animals was approximately 495 million dollars, or less than 4 per cent. on 13 billion dollars paid by the public for the products of the farm.

A friend of mine, a man fond of pushing things to their right conclusions, told me a story to illustrate this notion. He had recently been in St. Paul. He was standing at a Rock Island station in Oklahoma and had time to observe what was going on there. He noticed a car being loaded with big fine watermelons. He asked the farmer how many melons went into the car, and was told it was 1,050. He asked the farmer how much he got for them, and was told 5 cents each. The farmer added that he lived four miles out, and that it took him all day with two teams, one of which he hired, to load in time to catch the fast freight going north the same evening. He added that he was not making anything on his crop, but was trying to get them out for some ready money.

The local buyer came along with the agent to check the watermelon count and get the car billed out. My friend drew him into the talk. He told this buyer that he had just come from St. Paul, and that watermelons like that sold there for 60 to 75 cents each; and asked why the farmer should have to take a loss on them at 5 cents.

"Well," said the buyer, "we don't get any 60 cents from the dealer. We get about 30 cents and we have a big freight bill to pay."

My persistent friend then drew the freight agent into the conference, and found out that the rate on a car of melons from that point to St. Paul, a haul of 600 miles, was $75. They figured it down to a single melon, and found that the farmer got 5 cents, the buyer 30 cents or more, the railroad 7½ cents, and the retailer 30 cents. Of course, the ultimate consumer who paid 60 cents or more footed all these bills.

The farmer listened to this discussion with considerable interest. Finally he summed it up this way:

"Well, I'll be ——! I thought I was getting robbed by these railroads!"

To make this illustration concrete, let us sum up that carload of melons in dollars and cents, and see where it went:

DISTRIBUTION OF COST OF 1,050 WATERMELONS

	AMOUNT	PER CENT.
Received by farmer . . .	$ 52.50	8.33
Received by buyer . .	240.00	38.09
Received by railroad . .	75.00	11.91
Other expenses and profits.	262.50	41.67
Paid by consumer . .	$630.00	100.00

Out of that the farmer paid the hire of a team for a day and met the cost of planting, cultivating, and picking those melons, and spent a day's hard work with his own team into the bargain. Somewhere between him and the consumer's table, other people managed to "earn" $577.50, or just eleven times as much as he, the real producer, received.

Such marketing as this ought to be impossible. We are going to make it impossible as fast as we can. The time is rapidly approaching when a very large part of the 7 billion dollars is going to be diverted into the pockets of the producer and consumer. The whole tendency of our civilization has been to widen the big gap between these two, the man who grows and the man who eats the products of the soil. We have allowed to grow up elaborate and expensive methods to make the cost of selling as high as it possibly can be so that as many non-producers as possible may feed at the public expense. To-day the tendency is swinging in the opposite direction; and every man who lives by the gathering of profits from the handling of the necessities of life is called upon to show cause why he should not be curtailed to a considerable extent.

The first step in such a progression is to arouse the farmer to the fact that he has allowed an unsound economic condition which makes him the victim of any army of profit takers. When you confront him with the fact that last year he received 6 billion dollars for products that the public finally bought at 13 billion dollars, he realizes that something is radically wrong, but he does not clearly see a way to better his methods of selling. He has been educated to sell only one way. But when you take him out into his own fields and tell him in dollars and cents what the people are paying for his particular crop, and then show him in dollars and cents what he is getting for it, he begins to see things differently. He begins to think about it.

The systematic education of the American farmer in marketing has begun. It is being carried forward to-day by a large and increasing number of associations, by the railroads and many big corporations. Viewed from a selfish point, every extra dollar the farmer gets increases his purchasing power. Even the Government has shown signs of interest in this matter of better marketing. In the last annual report of the Agricultural Department, the Secretary announced the discovery that the farmer gets less than half what the consumer pays for farm products, and asked the question who gets the balance and what we are going to do about it.

In my acquaintance with the farmers of the country I have found that the best way to get their interest aroused is to supply them with facts. They are direct people; and they do not take much stock in theories. The instance of the watermelons which I have recited is of more vital interest to every farmer who raises watermelons and sells them for five or ten cents each than a whole book full of foreign statistics and elaborate theories would be. He will form his own theory after he has the facts as they apply to his own business.

Of course, I do not mean to state that the proportion of the total net retail price and the profits in the case of the watermelons prevails as an average. The profits in that case were probably much larger than the average toll exacted from commerce moving from the farm to the kitchen. Other instances must be adduced. I will cite a few figures and facts from our biggest concentrated market, New York.

WHO GETS THE PRICES WE PAY?

A thorough investigation into food prices in that city, made by me for the *Saturday Evening Post* some time ago, showed some interesting results. The

total bill for one year for eggs, coffee, rice, cabbages, onions, milk, potatoes, meat, and poultry, was 464 million 147 thousand dollars. Out of that the farmer received 274 million 289 thousand dollars, or 59 per cent.; the railroads received 25 million 45 thousand dollars, or about 5½ per cent.; and the cost of selling and profits on the products was 164 million 813 thousand dollars, or 35½ per cent.

The following table shows a few of the important items of daily food, what the farmers received for them, and what the consumer finally paid for them:

DISTRIBUTION OF COST OF FOOD STAPLES

	FARMER RECEIVED	PEOPLE PAID
Eggs	$17,238,000	$28,730,000
Cabbages	1,825,000	9,125,000
Milk	22,912,000	48,880,000
Potatoes	8,437,000	60,000,000

It will be observed that there is no uniformity about these figures. One of the most striking facts in every investigation of this sort seems to be that there is no scale of profits, nor anything approximating a uniform scale.

As for so-called trust or large trade organizations, most of them are purely business organizations. They can make more money on a much smaller percentage of profits than can the dealer in unorganized products, because they devote the very best brains of their organizations to the elimination of waste and extravagance in the distribution of their products, whereas the unorganized trades are full of the most flagrant kinds of waste. The second fact worth noting in this connection is that it is much easier to bring public sentiment to bear upon a great industrial or trading company than upon a thousand scattered and unrelated dealers.

One is reminded of the saying of the king, in a fit of temper over limits placed upon his power by his people, that he wished his nation had but one neck, so that he could have it wrung the easier. If you put the trade in any necessity of life in the hands of one company, you practically reduce it to a being with but one neck; and the history of our American commerce in the last few years seems to show that the wringing of that neck, in a case of need, is not a task beyond the power of the nation.

CITY WASTES IN FOOD DISTRIBUTION

From my own investigation, made some time ago, I was persuaded that the system of distributing food in New York City was little short of a disgrace to the city. More recent investigations made by other people have further convinced me on this point. In August, there was published the digest of a report to be made by an independent committee headed by Mr. William Church Osborn, and acting under the authority of the state of New York. A single sentence of that report states that, if the wholesale handling of food products in New York were in the hands of a powerful commercial agency, the present wholesale plant would, with two exceptions, be thrown into the scrap heap.

This preliminary report also contained some general figures that seem to bear out the impressions I gained from my own researches. The annual total food supply is estimated to cost 350 million dollars at the city terminals; that is with all freight charges paid. The consumer is reckoned to pay 500 million dollars. It is flatly stated that the difference is made up mostly of cost of handling, and not of profits. In fact, it is stated that the average small dealer, the corner grocer one hears so much about, does not make more than a bare living for himself and his family. It is roughly estimated that the simple inauguration of a fairly scientific method of marketing would save at least 60 million dollars a year in New York City, or about one fifth of the total amount that the producer receives for his products.

Here, then, is one definite figure, which throws at least some light upon the question where that 7 billion dollars goes. New York, in its marketing methods, is no worse than any other large city. I think it is better than some, and probably stands as about an average. Assuming that it is a fair average, it would mean that about 12 per cent. of the total amount the consumer pays is paid to make up for pure waste in marketing methods. That would be approximately 1 billion 560 million dollars out of the 13 billion dollars — more

than a billion and a half dollars thrown away in 1911.

My own figures on transportation cost show that the railroad freight earnings of the whole country on agricultural products are less than 4 per cent. of the total paid by the consumer, or approximately 495 million dollars on last year's production.

The same report by the New York Committee furnishes some other data that may be used as a rough guide to the division of the remaining 4 billion 945 million dollars of the 7 billion dollars about which I am figuring. It is reckoned, by this committee, that a simple and easy organization of large unit retail stores could and should carry on the distribution of all this produce, including deliveries to the doors of the people, at not to exceed 20 per cent. of the original cost. If this estimate — which, in my judgment, is too high — be taken as a criterion, it would mean that there is a legitimate expense of about 1 billion 200 million dollars for the distribution of the farm food products of 1911. It is now possible to make a rough approximation of the distribution of the whole 13 billion dollars paid by the people for the products of the farms of the United States in 1911. This tabulation would be as follows:

DISTRIBUTION OF COST OF AMERICAN FARM PRODUCTS OF 1911

	AMOUNT	PER CENT
Received by the producers, the farmers	$ 6,000,000,000	46.1
Received by the railroads	495,000,000	3.8
Legitimate expense of selling	1,200,000,000	9.2
Waste in selling . .	1,560,000,000	12.0
Dealers and retailers' profits	3,745,000,000	28.9
Total paid by the public . . .	$13,000,000,000	100.0

These figures are, of course, approximations. I have cited in each item the facts upon which the estimates are based. They are the result of cumulative experience and of sound investigation. Under analysis they will hold good in any city from the Lakes to the Gulf and from the Atlantic to the Pacific. They will approximate closely with the facts in any community where the consumers greatly outnumber the producers of food.

THE LESSON OF HISTORY

In these figures there is the basis for the greatest reform that this or any other country has ever seen. By working along the lines that are here revealed we can lay the foundations for the future prosperity of the United States, and it is by neglecting the clear lessons of these facts that we can undermine that prosperity. No man who reads history can ignore the fact that the making of the nations lies in the care of their food supplies. The cost of living made it possible for the despots of Rome to buy the people with shiploads of corn; hunger drove the French into the Revolution; no greater matter was ever fought out on the floor of the British Parliament than the question of the repeal of the corn laws and the subsequent freeing of all the necessaries of life from undue tariff burdens. No nation can be permanently great and powerful which neglects the obvious methods to furnish to the people ample supplies of necessary food products at the lowest prices consistent with sound business and sound morals.

On the contrary, it is a truism of economics that in such a country as ours the prosperity of the farming class is the prosperity of the whole country. I do not believe that the farmer gets enough for his products; that is, I do not believe he gets as large a share of what the consumer pays as he should. He works harder and longer hours for his money than any other class of men I know.

If in this country we were to lay upon him the burden of reducing the cost of living by reducing his prices for farm products, that burden could not be more unjustly placed. Not only would it tend to undermine the prosperity of the country, but it would make the matter in hand much worse that it was before, because it would remove at once the incentive that to-day drives men onward to open new and untilled fields and thereby to increase the potential food resources of the world.

The conclusion from these facts is ob-

vious enough. The farmers of this country must themselves take steps to advance their own claims to recognition in the counsels of the nation, and go forward with the task of reducing the cost of selling which is such an important factor in the high cost of living in the United States. That they will do it there is now no doubt. At the outset they will do it with a purely selfish motive, namely, to get more of the profits of their fields by taking a larger share of the profits away from those who do not produce. In the end, they will solve this great problem, because by this very process of elimination of undue waste and undue profits they will reduce the cost to the consumer and at the same time gain for themselves greater profits than they now enjoy.

SPORADIC EFFORTS FOR DIRECT MARKETING

It is, of course, not convincing to cite in support of an argument for a national movement the experience of a single city in an isolated case; but my meaning can perhaps be made clearer if I refer to the episode of Des Moines and its local market. In that city, last year, they tried a little experiment. They turned over the lawn in front of the City Hall to be a free and open market place. Any farmer could go there and sell his produce direct to the people. On the first day, potatoes, which had sold at $3 or $4 a bushel the day before, dropped to $1.75. Apples sold at 10 cents a peck instead of 25 cents. All other products met similar reductions.

Similar little episodes have taken place at dozens of places since then. These instances, however, are not cited here as representative of the real movement that must be undertaken. Most of them have been passing phases of popular discontent. Some of them have been mere bids for popular favor. Most of them have been flashes in the pan, so to speak. Yet they all contain the germ of a great revolution in our methods of handling food stuff. They are the first little beginning of a system of neighborhood markets that will some day become a national habit in the United States and wipe out the expensive features of our selling methods, reducing the selling to a system by which products of the farm will be handled under the same commercial methods as products of the factory.

To cite a few obvious instances of the sort of thing that will be wiped out in this country, let me draw upon some illustrations from the markets. The flat-dweller of New York to-day pays more than $6 for a bushel of beans for which the Florida grower gets about $2.25 and the railroads get about 50 cents for an 800-mile haul. The New England spinner pays an advance of about $10 per bale on cotton at the Southern gin, although the carriers get only $4.50 for the long haul from the South to the North. The consumer in the East pays 60 cents for a dozen eggs for which the farmer gets 24 cents, and the railroad 2 cents, less breakages.

No man in his senses proposes to abolish entirely the merchandising and selling machinery of the country. The new system of handling farm products will not interfere with the legitimate commission business of the country. Commission men will always be necessary. They are an established commercial organization. An arrangement can be made for the use of their machinery to better advantage than other distributing agencies. It is against the illegitimate and unnecessary machinery that our plans must be directed. We must make it impossible for any man to stand between the producer and the consumer merely for the sake of taking profits from both. My own study of this problem, extending over many years, has convinced me that in the trade and commerce in food stuffs produced by the farmers there is a great army who perform no useful function but who live upon profits that they do no necessary work to earn.

So much for the task that is to be performed. I think it has come to be pretty thoroughly known in this country that great and sweeping reforms along this line are to be accomplished. I have contended for ten years that some day this task must be accomplished. It is one of to-day's big jobs.

It is time to take up and consider the methods that we may follow. I do not believe, as some seem to think, that we can quickly formulate a plan in detail and advance it as a cure-all for our needs and

troubles, so, in this subject, due consideration must be given definite plans and formulas for the working out of the solution of this problem. Instead of that, which must be a work of development, I shall only cite some illustrations of what has already been done in this country and in other countries, and so, perhaps, point out the sources from which we may learn the methods that will succeed.

DIRECT MARKETING OF CITRUS FRUITS

For one of the most striking illustrations of direct marketing of a skilful and powerful sort we do not need to go beyond our own borders. A few years ago the citrus fruit growers of California were a widely scattered, unorganized, and shiftless group of independent farmers. They were losing money steadily. The grower received only a very small percentage of the amount the ultimate consumer paid for the oranges or lemons of California.

Someone conceived the idea of organizing all the big producers of that region into a sort of protective association. Soon the idea took hold and spread. It was diligently pushed forward by the big growers, and soon it spread to include about 65 per cent. of the citrus crop. The result has been three-fold. First, it has put the products of that region into every market of this country and has driven foreign fruits practically out of these markets. Second, it has made the citrus farmers of California one of the wealthiest groups of farmers in the world. Third, it has given to all the people of the whole country better fruit at fair and reasonable prices. The markets are to-day supplied steadily, consistently, and certainly with the grades of fruit they need.

Here and there other special farming groups have worked out similar plans. The apple growers of Oregon based their marketing campaign upon special care and skill in packing. They succeeded so well that Oregon apples are served in the hotels and on the trains in the very heart of some of the finest apple lands in the country, in Central New York, in Michigan, in the Ozark country of Arkansas and Missouri. In this instance, marketing became a science as exact and as exacting as the business of selling steel billets, or farm machinery, or any other product of a carefully and accurately organized industry. I cite this instance to illustrate the extent to which organization can be carried in the selling of farm products; for it is often argued, even by farmers themselves, that the farming branches of the world's activities cannot be organized, cannot be controlled within the limits of a scientific method.

A SOUTHERN TRUCK GROWERS' ASSOCIATION

In the Southwest, the truck growers of several states are to-day forming an organization very similar to that of the California fruit growers. They intend to see to it that they get a larger share of what the consumer pays than they have been getting. The strong men of the movement intend also to see to it that the consumer does not pay more than a fair profit over and above what the farmer gets and what it must cost to lay the perishable products of the fields down in the markets of the country. The leaders of the farming community to-day are not narrow-minded, selfish, or avaricious. This Southwestern organization, for instance, has expressly disclaimed any desire whatever to raise the retail prices of farm products. There is not one of its leaders who will not fight with all his strength to see to it that retail prices do not go up. They are fighting for a better share of the "sugar-loaf." These growers have been for years the victims of an unprofitable marketing system. The system has made it impossible for the truck-farmer of the Southwest to get a fair return for his capital and his labor.

It will be noticed that these associations in California, in Oregon, in the Southwest, and in many other sections of the country, are local institutions having as their object the helping forward of agriculture in those particular regions. There is not in this country any strong national coöperative association which has as its object the pushing forward of American agriculturists as a whole. The Agricultural Department at Washington has spent more than one hundred million dollars in ten years studying

methods of farming and working out in splendid detail, in many instances, means by which the productive activity of the land will be increased and farm operations rendered more efficient. This work has been splendidly done and has been of very great assistance to the farmers of the United States in many instances.

There has not, however, been any Federal aid given to the farmers of the country in the matter of marketing their products. It is along that line that the greatest good can be done by the Government and I hope that before very long the Government will turn its attention and its effort strongly in the direction of improving the selling methods of the farm and in formulating a national market bureau to coöperate in marketing the products of the farm. In this matter of organizing farm industry, other countries have blazed the way, and it only remains for the United States, either through its Federal Department of Agriculture, or through coöperative organizations of the farmers themselves, or through both, to learn the plain lessons that can be learned from a study of such development in Denmark and in England and to apply these lessons so far as they can be applied in the United States.

THE EXAMPLE OF DENMARK

The history of agriculture in Denmark for the last generation is one of the most inspiring records, and I wish that I had the space to go into it in more detail than I can. After a disastrous war in 1864, Denmark, as an agricultural country, was flat on its back. Wheat had been the staple industry, but the fields were impoverished and the growers of Denmark could not compete with the new fields of other lands. The farmers turned to stock growing and dairying, but with very indifferent results, because of very inferior grades of cattle and very inferior methods in carrying on the industry.

The progress of the country from that condition to the present has been solely the result of careful scientific methods applied to agriculture. The process began, of course, with better breeding and proceeded from that to the establishment of extraordinarily careful testing methods, to the general teaching of the care of animals, and to the working out of scientific methods of marketing and manufacturing. In 1880, the first coöperative creamery was started with the result that to-day the manufacture of butter is the chief industry of the country. In 1906 there were more than 1,300 creameries producing annually a hundred thousand tons of butter of which more than 80 per cent. was exported to Great Britain. At the present time the Danish farmers ship butter into almost all the markets of the Old World.

In 1895, a system of cow-testing was organized with twelve members. In ten years the system grew into 401 associations with a total membership of nearly nine thousand farmers. It is stated in an official report that, as a result of this system of testing and keeping records, the average increase in all the associations for five recorded years was 932 pounds of milk and 43 pounds of butter per cow. That goes very far toward accounting for the growth of the dairy industry in Denmark.

Coöperation has become the keynote of all agricultural effort in that country. There are coöperative creameries, breeding associations, butter selling associations, egg export associations, farmers' insurance associations, packing associations, and marketing associations of all sorts. From a money making point of view the results of these scientific agricultural and marketing organizations are remarkable.

In the matter of marketing, the Danish farmer carries on his industry on close and accurate quotations at all times. He is kept informed as to exactly what prices are being paid for his products in all the markets where he deals, and he has gradually eliminated all unnecessary expense in marketing his products, so that he is to-day able to obtain for himself a very large proportion of what the consumer pays for his products.

THE GREAT COOPERATIVE MOVEMENT

While I do not pretend to state that the coöperative store or the coöperative trading society would be an immediate and

effective solution of the high cost of selling, it seems to be a fact that all the economists of the day are studying the coöperative movement very closely because it seems to be the most likely of all the forces that may be utilized to reduce unnecessary burdens of expense upon the consumer and unnecessary taxes upon the producer.

The coöperative movement of which one hears most and which has been carried perhaps to the greatest perfection had its rise in a weaving town called Rochdale, in England, in 1844. There had been small coöperative stores in Great Britain before that time, but none of them assumed any importance from a national point of view. The little Rochdale experiment, however, grew very rapidly, and in 1862, the first year in which any comprehensive report was compiled, there were four hundred societies in the United Kingdom, having a membership of 90,341 people, and they did a business of nearly 12 million dollars and saved in the form of dividends to their members more than $800,000.

The growth of this movement in the United Kingdom is revealed in some figures compiled by our Department of State last winter in connection with the investigation into coöperation in the cost of living throughout the world. These figures are given in the table above.

It appears from these figures that the coöperative merchandising of the United Kingdom must now approximate 600 million dollars a year and that on this turn-over the members save about 60 million dollars a year, which goes to nearly three million families. This constitutes the biggest demonstration of coöperation that has yet been afforded by the experience of the world.

It is not by any means the only one. In Germany, coöperation is a firmly established principle and practice. At the date of an investigation by the agent of our Government, there were in Germany 28,000 societies with a membership of more than 4,500,000. Of these, however, only about 2,200 were really coöperative societies for the distribution of the necessities of life. In this class of society there were about 1,300,000 members. Apparently the annual turnover is something less than 100 million dollars.

In the matter of marketing reports and improvement in marketing methods, the Canadian report for 1912 is interesting. There is a division of that Government Agricultural Department called the "Extension of Markets" Division. Its work includes the inspection of cargoes and supervision of refrigeration and many other details of this sort. It also includes, however, a system of compiling records of wholesale prices in all the markets of Canada, Europe, and the United States day by day. It furnishes to Canadian shippers and farmers full information with regard to outside markets and a full record of prices in those articles.

A bureau of this sort at Washington

THE GROWTH OF COÖPERATIVE SOCIETIES IN GREAT BRITAIN, 1862–1908

YEAR	SOCIETIES	MEMBERS	VALUE OF SALES	AMOUNT OF NET PROFIT
1862	400	90,341	$11,340,921	$ 804,631
1865	585	124,659	16,396,896	1,357,038
1870	901	248,108	39,860,189	2,689,694
1875	1,455	480,076	89,909,518	6,945,377
1880	1,283	604,063	112,986,806	9,081,391
1885	1,491	850,659	152,146,722	14,525,033
1890	1,806	1,140,573	212,535,911	20,779,498
1895	2,079	1,430,340	267,787,210	26,190,885
1900	2,530	1,886,252	393,759,280	39,744,214
1905	2,994	2,402,354	476,292,465	47,785,692
1906	3,062	2,493,981	497,703,463	50,027,790
1907	3,133	2,615,321	540,623,984	54,661,892
1908	3,014	2,701,123	549,619,037	53,444,297

could be made the nucleus of a system whereby a very large part of the present leakage between the farmer and the market could be eliminated. We must have a bureau of marketing which will collect accurate and complete records, of the prices of farm products in all the markets of the country and distribute these records in the form of bulletins to the farmers of the country. We must organize a system whereby this vital information will be put into the hands of the farmers day by day. This is exactly the kind of information that the producers of steel, of copper, of textiles, and of every other line of staple manufacturing have at their finger tips at all times. It is essential that our farmers obtain similar information as complete and authentic as it can be obtained, and the Government of the United States could do nothing that would more certainly advance the prosperity of the farming community and at the same time tend more strongly to reduce the cost of farm products to the ultimate consumer than would the publication of a steady and consistent record of market prices of farm products. Under such a system the farmers would receive these bulletins, which, in addition to market quotations on farm products, would furnish all items of cost between the farm and the markets, such as the best way to pack, the freight and express charges, terminal charges, cold storage, etc., if any, and many other things that will tend to bring about marketing methods necessary for the farmer to know.

THE PERENNIAL BOGEY OF WAR

THE ABSURD NEWSPAPER DRAMA IN WHICH CONGRESS PLAYS THE HERO, GERMANY OR JAPAN THE VILLAIN, AND THE PANAMA CANAL OR THE PACIFIC ISLANDS THE DEFENSELESS HEROINE, FOR WHICH THE AMERICAN PEOPLE, AS SPECTATORS, PAY $1,000,000 A DAY

BY

DAVID STARR JORDAN

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IT IS an open secret, a very open one, that spring-tide war scares have but one purpose, the extension of our already monstrous military and naval appropriations. The real object of attack is found in Congress. When the victory there is won, the appropriations made, another cipher added to the "endless caravan" of waste, there is no external sign of jubilation. Those concerned put their pasteboard armies back into the box and settle down quietly to the business of spending until the annual budget is made up again.

There can be no doubt that the most powerful lobby in the world is that employed by the great armament builders of England and Germany. It is equally plain that these huge rival war trusts consciously and purposely play into each other's hands. The war scare as promulgated through the "Armor-Plate Press" of these countries is the chief agency for affecting public opinion and controlling the action of Reichstag and Parliament. The greater and more imminent the danger, the louder the journalistic noise, the greater the appropriations are likely to be. But when one remembers that the financial resources of all the nations concerned are already strained to the limit of exhaustion, by war expenditures in time of peace, and this in spite of the interrelations and mutual dependence of the civilized world which render war impossible, one can see no reality in these clamors. They would be simply ridiculous were it not for their malicious efficiency in wasting the substance of the people.

Except as a result of accidental clash

in uncontrollable war machinery, international war is already impossible. Even these war schemers do not want war. All they care for is appropriations. And as wolves wear sheep's clothing at times, so do these monstrous war agencies claim to be the true promoters of peace.

THE POWERFUL WAR LOBBY OF EUROPE

An analysis of the war lobby of Europe will show that, besides the war syndicates, their stockholders in and out of office, their employees in and out of office, and their subsidized journals; besides the group of contractors, adventurers, and ghouls, who make money out of war; besides that part of the army and the navy which is anxious above all things for preferment or for the testing of war implements, we must count a vast number of others, more or less allied with these, acting consciously or unconsciously with the war lobby, throwing all their influence on the side of militarism and the favoring of all schemes of spoliation, savagery, and waste. The caste spirit, strong in England and dominant in Germany, is ever and in all nations an incentive to war. It is claimed in each nation as a matter of course that all its war expenditures are solely for necessary national defense. And, as a matter of course, in each nation, no one believes this statement of the other nations. Thus do the armament pirates play into each other's hands.

This article is devoted to a discussion of our own war scares and to the foundations (if the word can be used for things so ephemeral) on which they rest.

And at the start, we may notice in passing that no war scares originate along our Canadian border. There are no soldiers there, no ships, no guns. There have been none for nearly a century. Not being armed, the men on both sides behave like normal people, and there is nothing to build a war scare on. The border is perfectly defended; its defense is the mere fact of peace.

Because no other nation could, by the most violent stretch of imagination, be regarded as a military opponent, Germany and Japan are forced into the rôle of international villain. When we ask why this country should spend millions in the fortification of Panama and Hawaii, we are confronted with the secret schemes of Germany and Japan. Germany, intoxicated with prosperity, revolts at our Monroe Doctrine; Japan, intoxicated with success, is eager for revenge on account of the trades unions of San Francisco. And so we squander our money, eight hundred and fifty thousand dollars a day, besides interest, pensions, and waste of men's time, that we may not be caught napping when these evil designs mature.

We know of course, that there is nothing in this — that there has never been anything in it, that there are no evil designs, that nothing Germany or Japan have done or can do constitutes a "menace," and that any injury they might inflict would rebound doubly on themselves.

THE GERMAN BUGABOO

With Germany, our public relations are most friendly and they have always been so. We are not concerned in any secret understanding to her disadvantage. We have not blocked her Bagdad railway nor opposed the extension of her influence anywhere. Nearly one fourth of our people are of German origin. In our educational traditions, Germany has largely replaced England. A very large share of German commerce is with the port of New York. But it is said that our Monroe Doctrine, acceptable enough to Great Britain, is offensive to Germany. She may sometime want a coaling station on the Caribbean Sea. Perhaps the petty island of St. Thomas may be sold to her for that purpose. She may hope to dismember Brazil, taking from her the southern states, in which there is already a thrifty German population. But nothing of this has any foundation in reality. There is no evidence of any desire of the Germans in Brazil to escape from Brazilian jurisdiction. Even should an independent German-Brazilian state become possible, it would ally itself with Argentina or Uruguay, rather than seek shelter under the spiked helmet of German imperialism. The caste-ridden, debt-ridden domination of Prussia is not loved by Germans abroad, nor by Germans at home. Of all the

memories of the Fatherland, the expatriated German dwells with least pleasure on the distinctions of caste and the exaltation of the army.

JAPAN THE BOGEY IN THE EAST

On the Pacific Ocean Japan has to fill the rôle of disturber of the peace. To be sure, Japan is a small nation of poor people, and people who have always been especially friendly to our own. Her population is less than two thirds ours. Her wealth is little more than one twentieth. She has the handicap of a very heavy war debt, amounting to nearly one sixth of her assets, relatively more than twenty times as large as our own national debt. She has fought two great wars within twenty years, the last one to exhaustion. Although she was victorious in every battle, it was a drawn struggle at the end; for neither combatant could raise or borrow money to keep its forces longer in the field. Few people are taxed so heavily as the Japanese and even their patience cannot be tried farther. Moreover, wisely or not, righteously or not, Japan has taken possession of Korea as the only way of keeping this misgoverned buffer state out of the clutches of Russia. This too is a costly venture with vast expenditures and no returns except in the hope of ultimate unification of the two nations. The Japanese investments in South Manchuria are sources of risk as well as of profit, and the cost of each of these ventures tends to complicate home politics as well as to delay the great internal improvements, road building, railroad building, sewer building, and educational development of which Japan stands so much in need.

The system of protective tariffs, subsidies, and rebates, which Japan, in emulation of Germany, has adopted is also a heavy burden on the people with no redeeming features save those of keeping up appearances and of starting the wheels of industry a little more quickly than would have been otherwise possible. And for this too the workers have to pay. The Japanese are an optimistic race, and obedient, but at bottom they are not warlike. And all the common people as a whole are thoroughly opposed to war and war taxes. They are as eager for a new war as the people of San Francisco for a new earthquake.

THE FAKED PERIL OF HAWAII

The first sign of approaching consideration of army and navy bills by the committees of Congress is usually the appearance of "35,000 Japanese ex-soldiers" among the plantation hands of Hawaii, followed by a larger number, usually estimated at 76,000, at Magdalena Bay in Mexico. An honorable general in our army has been found to vouch for the contingent force in Hawaii. It is probably a fact that there are some ex-soldiers in Hawaii, a dozen it may be, or possibly a hundred in all. Even ex-soldiers must live, and until 1907 they, with other rice-field hands, were given passports to the sugar plantations in Hawaii. In 1900, when the islands became part of the United States, a majority of their population was Japanese. Naturally this is still true. But no passports for Japanese laborers to enter Hawaii have been granted since 1907, and it is known to be not true that any considerable number of the Japanese in Hawaii are ex-soldiers. Such as they are, it is not true that they are armed by the Japanese Government or that they have any understanding with the Japanese Government as to their course of action.

One may safely deny, if so preposterous a story merits denial, that the Japanese Government has any designs whatever on Hawaii, or that there is the slightest excuse in reason for the costly fortifications we are erecting about Honolulu or Pearl Harbor. For the Japanese to seize territory of the United States would be simple suicide. It would be the signal of their financial and therefore military collapse, for the "sinews of war" are not soldiers but money. It would mean the loss of their foothold on the continent of Asia. There is nothing so important to Japan as the retention of her financial credit, now most jealously guarded, and with this the rulers of Japan will take no chances. Nor have the Japanese any desire to provoke the enmity of America even were it safe to do so. America is her best customer, handling one third of her ex-

ports. The historic relations of the two nations have been most friendly. Certainly there have been local infelicities for which neither America nor Japan was responsible, but none of these have affected the traditional friendship.

On the positive side, the Japanese as a whole have a sincere admiration and affection for America. The reason for this is that some hundreds of their ablest men were educated in American Universities. And the Japanese student adds to our traditional college loyalty an intensified touch of his own, whereby memories of Harvard, Yale, Cornell, Wisconsin, Stanford, and the rest become transfigured in a light of Shintoism. For every Japanese is an idealist. "Scratch a Japanese, even one of the most advanced type," says Professor Nitobe, "and you will find a Samurai." And to those who have been freely educated in American colleges, this Samuraism works itself out in loyalty to America as well as to Japan.

The "designs of Japan on the Philippines" may be very briefly dismissed. Japan does not want the Philippines. She could not afford the luxury. She could not hold them nor control them nor take them as a gift. She has her hands quite full with Formosa and Korea. It would be almost as difficult for Japan to administer at long range the affairs of the Philippines as for us to attempt to administer the affairs of all Spanish America.

JAPAN NOT A COLONIZING NATION

The usual idea that Japan is an overcrowded nation that must seek colonies for her people is not more than half true. The wonderfully rich rice lands of the southern half of the country are certainly crowded. But the Japanese, if fairly comfortable, like to live in a crowd. Personal privacy is not their ideal. The homeless rice-field hands will leave their native region to go anywhere where wages are paid. The thrifty burghers and farmers, who alone form the stuff for colonies, will not go. The north of Japan, a rich country, fit, not for rice, but for the cultivation of hay, cereals, and grazing animals, was long left unoccupied and even now fills up slowly. The rush to Korea and Manchuria was not of colonists but of adventurers, and most of these were soon forced to return. A recent report by Michitaro Sindo on colonial possibilities in Peru was wholly adverse. There is probably but one nation "under the sun" that would take the Philippines as a gift, and this one for ulterior reasons, for "the mirage of the map," for the prestige of domination, and not for any strength or profit that the possession of these islands would bring her.

For the last two years the war scares of the "Armor-Plate Press" have largely centered about Magdalena Bay in Lower California. To understand the actual facts involved in that situation, we must premise two things: the sale of concessions by Mexico and the optimism of Japanese promoters. The Government of Mexico has offered its public lands, its fishing rights, and other national properties freely, to bidders of any nation. The aim of this policy is to raise money as well as to develop national resources.

Among the Japanese residents of California are some business men of high order. Others there are, without credit or capital, who are eager to take ventures such as they see men of other nationalities taking. Promoters are promoters everywhere and a Japanese adventurer may throw out hints of the backing of rich financiers or even of partnership with the Government, when, as a matter of fact, he may have neither money nor credit and the Government no knowledge of his existence.

THE TRUTH ABOUT MAGDALENA BAY

Three different Mexican concessions are involved in the Magdalena Bay situation: the Sandoval fishing concession of the shores of Lower California, the "Chartered Company's" concession of desert lands, and a fishery concession about Salina Cruz.

Magdalena Bay lies in the rainless belt of Lower California, a little nearer to Mazatlan than to San Diego, as far from either or from any town as Boston is from Washington, and almost as far from Panama as it is from Boston. There is an excellent harbor, rich in fishes, in a stormless sea — a suitable place for target

practice, as there are no jack rabbits even to be disturbed. There is no town and no place for a town; for there is no fuel, no arable land, and no water except from a small brackish spring in the sand dunes.

A concession covering the fishery rights to Lower California was granted some years ago to Mr. A. Sandoval of Los Angeles. At Magdalena Bay, Mr. Sandoval has a small cannery which puts up crabs and sea turtles. The flesh of the great tuna is salted and dried in the form in which it is used in Japan as a condiment. Other fish — corvina, sea bass, cavalla, yellowtail, and the like — run in great abundance, but these are mainly used for the manufacture of fertilizer. It does not pay to salt them for the reason that the Mexican rock salt does not strike in quickly enough, consequently the fish dry up or spoil before curing, and other salt is too expensive. The markets for fresh fish are much too far away, and for ordinary salt fish there is no market nearer than China.

There are now about one hundred people at Magdalena Bay, six of them (not 76,000) are Japanese, as many Chinese, the rest mostly Mexicans. The Mexicans are not good fishermen. At places along the Lower California coast, the Japanese dive for abalone, the meat as well as the shell of this big sea-snail commanding a good price.

Since 1907, the Japanese Foreign Office has granted no passports for laborers to come to any part of North America. It is therefore not possible for them to increase this colony very much. It is, however, apparently true that individual Japanese have made inquiries in regard to the concession. Mr. Takesaki, the foreman of the cannery at Magdalena Bay, was formerly in charge in a sardine cannery (now closed) on the Inland Sea of Japan. It is said that this enterprise failed on account of the prohibitory tariff on tin. Meanwhile Mr. Sandoval is developing the fisheries under his control as well as he can with French capital — not Japanese — and he hopes to bring fishermen from Europe. No one could object to a French cannery at Magdalena Bay or to a Japanese cannery or a Chinese any more than to an English railway from the City of Mexico to Vera Cruz. It is only the exigencies of the Armor-Plate Trust that lend magnitude to such petty ventures.

But the "Armor Plate Press" has a second hold on Magdalena Bay. The "Chartered Company of Lower California," managed by a California promoter and said to be financed by a New Hampshire lumberman, holds an option on a tract of desert about Magdelena Bay. This is said, on dubious authority, to contain 8,000 square miles or 5 million acres. Authority a shade better places it at 2 millions acres. It is offered at a few cents per acre (10 cents to 25 according to the current newspapers). It is reported that an investigation made by an English syndicate pronounced the land worthless and the title doubtful. But recently a Japanese gentleman of San Francisco went down to look at this concession. This man is known in California mainly as one of the owners or promoters of a bank which failed through its efforts to secure friends by making loans on inadequate security. In any event it is known that he had control of no capital and represented only himself. No purchase was made and nothing happened on his return. So far as I know the land title still rests with the Mexican Government. It might be presumed, without proof, that the promoter went on a pass, and that his visit was desired in order to advertise the lands in question. The incident may mark an apparent effort to induce some one in America to buy these worthless lands to keep out the Japanese. Already the writer has received one letter urging that the Carnegie Peace Endowment should undertake the purchase. How many letters the directors may have received can only be guessed. Perhaps none; perhaps the force of the effort may have been spent on Congress. But perhaps Mr. Blackman or Mr. Henry or others who may hold this option on the land had no idea of using Japan as a lever toward finding a purchaser. Perhaps the Japanese promoter went down on his own initiative. The low price may to him have spelled oppor-

tunity. His highly respected countryman, George Shima, "the potato King of California," has become a millionaire by investments in overflowed lands in the Sacramento basin. But what of it anyhow? Suppose a certain tract in Mexico passes from American to Japanese control — or French or German or Chinese. What is there in the transaction to serve as a "menace" to the United States? But it "menaces" the Panama Canal, and the canal is nearly three thousand miles away. Moreover, in all this discussion it must be remembered that, whatever be the fact about personal ownership, the Constitution of Mexico forbids the alienation of any of its territory. Although men of all civilized nations may hold land titles in Mexico, as they hold land in the United States, not a foot of Mexican territory can ever be sold to another nation. And it is certain that nothing would induce Japan to buy a foot of it under any circumstances. With our Senators, our newspapers and our "Armor Plate" patriots on the alert, it would doubtless prove a most costly holding. On this our "dockyard strategists" are all agreed.

The latest adventure to disturb the patriotic syndicates is that of the fishery concessions about Acapulco. These are a thousand miles from Magdalena Bay and reputed to be in "dangerous proximity to the Canal Zone," to which they are as near as Havana is to Boston.

From the best available authority it appears that the Government of Mexico has offered three fishery concessions along this part of her coast, each of about 200 miles in extent, the one centering at Manzanillo, the second near Acapulco, and the third at Salina Cruz. The rental price has been for each 3,000 pesos ($1,500) — this covering a period of ten years. The Toyo Hege Kaisha (Oriental Whaling Company) of Tokyo has obtained an option at a special and much reduced price for the three. The purchase has not yet been made, but a group, under direction of Mr. Okayama of the whaling company, has been formed to investigate the fishery possibilities of this region. It is understood that a commission is now (since January, 1912) in Mexico, assisted by a fishery expert, a diver, a ship's carpenter, with two or three stenographers and interpreters. These concessions involve the right to sell fresh fish in six Mexican cities — Mexico, Guadalajara, Puebla, Colima, and two others — at a rate not exceeding 12 centavos (6 cents) a pound. They carry no shore rights as to the building of wharves, nor any matter of possible interest to the Japanese Government. In spite of the abundance of fish, it is not clear that these concessions have any practical value. Fish canning is a precarious occupation under the tropical sun.

However, new possibilities may exist among the shell-fish of the coast and perhaps something may be done with sea turtles. But, though wishing all success to the whaling company, we may well leave their operations to themselves. They need no advice from us. Still less is it worth our while to worry over the dangerous menace of their presence. Nor need we continue to throw millions on millions of good money after bad to be certain that our coasts are perfectly defended against imaginary foes.

It is no tribute to our "Yankee horse sense" that we develop our national defenses at the bidding of the armament lobby. It is no evidence of our patriotic forethought that we spend nearly a million dollars every day to ward off imaginary attacks from an outworn, bankrupt, and impotent mediævalism, which could not harm us if it would and would not if it could. Nor are we different in this from other nations. In Europe everywhere, in Japan, in South America, in Australia, and even in New Zealand, in every land which has an army and navy, actual or potential, the same story is told. The larger the actual army or navy, the more effective the war scares, because the number engaged in promoting them is correspondingly increased.

But the stage is set. The play is on and war scares and war waste in time of peace will not end until we develop a robust public opinion which shall realize the fact that feudalism is dead, that war is dying, and that the time has come for nations to devote their mind and money to things more real and more pressing.

THE BATTLE LINE OF LABOR

II

THE WARFARE

THE INCREASING VIOLENCE OF BOTH SIDES DURING 36 YEARS OF STRIFE — CAUSES OF STRIKES — SOME OF THE BARBARITIES OF THE CONFLICT — THE FUTILITY OF COURTS AND ARMIES TO ESTABLISH INDUSTRIAL PEACE

BY

SAMUEL P. ORTH

AUTHORS' NOTE.— *A number of the men interviewed while I was gathering material for these articles do not desire to have their names disclosed for divers reasons. It has been necessary, therefore, in a few instances to resort to the less satisfactory method of giving the facts without naming the authority. If any reader, however, is curious about the authenticity of my sources, I can privately furnish the references in most cases.*

STRIKING is a habit. An average industrial city like Cincinnati or Omaha has a strike going on or threatened nearly every day in the year. From 1881–1905, the United States Bureau of Labor tabulated 36,757 strikes, affecting 181,407 establishments. In 1903 there were 3,494 strikes, an average of ten a day. Some of these strikes last for months, even years. Others happily end in a few days. In 1894, the year of the Pullman strike, 610,425 men were out of work. This is about as many men as live in Philadelphia — one whole city idle for weeks. In 1902 there closed ranks in the war of wages 659,792 laborers — more than fought at Gettysburg on both sides. These figures do not include the total number of men thrown out of work because of strikes. Sometimes the number forced out is very large; for example, when the supply of coal is cut off, as in England last year, hundreds of thousands are forced into an unwelcome idleness.

About one fourth of these strikes were in the building trades, and one third in coal and coke industries. Their causes are given in the accompanying table. The last line of the table shows that the number of strikes for recognition of union has multiplied five-fold in twenty-five years. This means either that wages and hours are less oppressive than formerly, or that the unions deem themselves so powerful that they can coerce the employer to make minor concessions, or that certain conditions, such as discharge of union men, are growing more irksome.

CAUSE OF STRIKES

	1881 PER CENT	1891 PER CENT	1901 PER CENT	1905 PER CENT
For increase of wages	61	27	29	32
Against reduction of wages	10	11	4	5
For reduction in hours	3	5	7	5
Recognition of union	6	14	28	31

The number of strikes fluctuates from year to year, but there is no apparent abatement in number. This is universal. We share this unhappy fate with France, Germany, Austria, and England. In the latter country the number has diminished, but their violence has not lessened, and in all her troublous industrial history she has had no more desperate strikes than the dockers, miners, and railway strikes of the past two years. Nor can it be said that the amount of violence in our country is greatly diminishing.

The labor war is ever present. Every industry is its battlefield, and every community feels the shock of battle. This

was graphically brought home to me in a recent trip to a number of industrial cities. Here is a catalogue of what I found: In New York, the fur trimmers had been out for months; carpenters, shoemakers, and foundry men in scattered shops, most of them of minor importance, were striking; the longshoremen and seamen on North River were fighting for higher wages; the musicians deserted the theatres, leaving only a piano and drum to tap tunes for the dancers and singers; in the leading hotels and restaurants the waiters deserted at the dinner hour, so that the diners were tempted to help themselves, and banquets were left high and dry after the guests had taken their places at table.

In Boston, the elevated railway employees were just bringing an important strike to a close. In New Bedford, the cotton mills were idle, and in Fall River, the loom fixers were amicably adjusting some differences with their employers. In Albany, the men on one of the street car lines were threatening to go out. In Rochester the molders in the heating foundries were in a ferment. In Buffalo, the molders were out. In Cleveland, during the national convention of the Fraternal Order of Eagles, a non-union band was discovered in the big parade, and twenty-five other bands refused to play until the offenders left the column. These independents then had a tiny parade by themselves. The Cleveland school board was in a muddle over textbooks. The board had changed some books before the contract term had expired, and the labor unions of the city discovered that the new books were published in an "open shop," and they were making some arduous protests against using non-union products in the schools. And in this city several important strikes, one among the boiler makers, another in the aluminum casting industry, had just come to an end.

Passing on to Toledo, I found that city, which is a stronghold of unionism, in the midst of a teamsters' strike, and Chicago, the very centre of union activity in the Mississippi Valley, was just recovering from a pressmen's strike that had driven every daily paper, except the Socialist *World*, from the corner news stands; on the street car system, the conductors and motormen were contemplating going out; and the elevated railway employees were balloting whether to strike. There were also strikes in some foundries, and boiler shops, and machine shops, and the milk wagon drivers of one of the largest suburbs refused to deliver milk.

In this journey, I had not touched those portions of our country that were in greatest industrial ferment during this summer — like the coal mines of West Virginia.

A few of the strikes I witnessed were carried on peacefully. Most of them gave opportunity for violence. The marine men used guns and paving stones; in the Boston "L" strike, dynamite and brick bats were used; the strike-breaking teamsters in Toledo had red pepper thrown into their eyes. The Evanston milkmen, or their sympathizers, fired asafetida "bombs"; and in the newspaper fight at least one man was killed.

STRIKES JUST AND UNJUST

This newspaper strike developed some very interesting features. The strike was brought on by the pressmen on the Hearst papers. Mr. Hearst had an agreement with his pressmen as to the number of men that should operate a press. It was nearly twice the number used by the other papers, and when the agreement terminated he gave notice that he would not renew it, but would adopt the basis of agreement that the other papers had with the union. His men, however, refused to submit to the agreement which their own union had made with other Chicago papers and struck. Then the pressmen of the other dailies struck in sympathy and the stereotypers followed. The principal cause for striking was the desire of Mr. Hearst to conform to the general labor conditions of his competitors, conditions which the unions themselves had sanctioned with the other Chicago papers by joint agreement. The national officers of the stereotypers promptly wired their men to go back to work. But the head of their local union was a radical with ambitions of his own, and he controlled the situation.

The stereotypers went out, and the national organization withdrew their charter. The pressmen had no charter revoked. The typographical union absolutely refused to go out in sympathy with the pressmen and stuck to their contract with the papers. It should be added that the pressmen in the other papers broke their contracts with their employers when they struck without submitting their grievances to arbitration.

These experiences illustrate some of the best and worst features of the labor situation: the difference between the unions — one sticking to a contract, the others breaking their agreements; the difference between national and local leaders — the former inclined to be conservative and careful to maintain the obligations of contract, the local leaders often radical and willing, for personal or other reasons, to violate their written agreements; and the influence of local leaders upon the animus of their men.

The newsboys and delivery wagon drivers went out in sympathy, and the street car conductors and motormen were cordially sympathetic, and allowed the sale of the *World*, the Socialist daily, on the cars. This paper took a sudden leap into prominence and circulation during the strike, and was strictly unionized.

GLIMPSES INTO STRIKE HISTORY

The present industrial era, characterized by tumultuous clashes between employer and employee, may be said to date from 1876, the centennial year. In 1877, all the big railroads between the Atlantic and the Mississippi were tied up for nearly a month by one of the most universal and violent strikes in our history. So general was the mob spirit and so destructive its manifestations that President Hayes issued a proclamation warning the nation that, if violence did not cease, he would proclaim martial law and call for volunteers. Pittsburg, Reading, Cincinnati, Chicago, Buffalo, were mob-ridden. In Pittsburg, soldiers were stationed in a round-house. This was attacked in Indian fashion, a car of coke was soaked in oil, fire set to it, and it was then pushed against the improvised fort. The soldiers issued in a body and twenty men were reported killed in the mêlée that followed. There was an enormous destruction of property, and great loss of life. The men were not well organized at this time. They simply quit work when the companies reduced their wages 10 per cent. and increased their burdens and refused to arbitrate. There were not very many strikers in the mobs; but the strike was the opportunity of the lawless.

This historic strike opened the way. Scarcely a year has passed since then without an important battle. We can touch only the most significant. Let us take 1892, the year of the Homestead strike. This strike is distinguished for its attempt to open the closed mills with Pinkerton detectives. They were placed in barges that had been fitted up with bunks and barricades, and in the gray light of early dawn they hoped to float unobserved to the mills. But the pickets were too alert, an alarm was given, and strikers rapidly collected on the banks of the river. The Pinkertons fired and the battle was on. The crowds hastily made a breastwork of steel billets, got a brass ten-pounder, and poured volley after volley into the barges. When night had fallen, the strangers were glad to surrender and march away through the jeering mob.

In this year, the quarrymen in the New England quarries were locked out, and stone cutters the country over put New England granite under ban. The unions cabled to England, Ireland, Scotland, and Italy, notifying stone cutters of the trouble and advising them to stay away. The sympathetic effects of this New England tie-up stopped work on the Memorial Arch and the Water Tower, in Brooklyn; the Mutual Life Building in New York; the Capitol at Albany; the Congressional Library at Washington; the Reading Terminal in Philadelphia; the Equitable Building in Baltimore; and Grant's Tomb — with its motto "Let Us Have Peace" — on the banks of the Hudson, as well as large buildings in Chicago and other Western cities. The solidarity of labor was making itself felt.

In August of this unhappy year occurred the "Buffalo Riots," induced by the strike

of the trainmen and firemen on the lines that centre there. Many cars were burned and many men were killed and wounded on both sides. In New York City the armories were bustling with activity, regiments placed on call, and field guns mounted, in anticipation that the strike might spread to the metropolis.

Further, in this uneasy year, there were strikes in the building trades, East and West; the weavers of Fall River, the cloak-makers of New York, the street-car men in Indianapolis, the spinners of New Bedford, the coal miners of Tennessee, the "Big Four" yardmen of Columbus, the gas and electric light workers in New Orleans were among the minor recruits to this striking host; and many lockouts added their misery to the general confusion.

It was a tumultuous year, this year of 1892, that ushered in the fourth century of the white man's America — "civilized" America!

Eighteen hundred and ninety-three saw the beginning of hard times, and strikes don't flourish in hours of want. In 1894, the Pullman employees struck primarily to resist a wage reduction which was not accompanied by a reduction in the rental that the company demanded for its houses, in which the workmen lived. In spite of the most urgent requests from national civic bodies, from the Chicago Council, and from many distinguished private individuals, the Pullman Company stubbornly refused to arbitrate the question. Then the American Railway Union issued a proclamation: they would boycott Pullman cars, and every road that allowed the offending cars on its tracks. Chicago will not soon forget the 4th of July of that year. The mob found its opportunity on the 3d and possessed itself of the infinite network of tracks that weaves itself around the heart of the city. Yards, sidings, crossings, signal towers were demolished; many cars tipped over; their contents looted; and the cars burned. The impotent police were reinforced by 3,600 deputy United States marshals, the Illinois State troops, and finally by United States regulars. It was this strike that led to the imprisonment of Mr. Eugene V. Debs for contempt, and gave a new impetus to the use of the injunction in labor disputes.

THE GOVERNMENT TO THE RESCUE

The anthracite strike of 1901 was investigated by a notable Federal Commission. Its report brought to light details that make one shudder at the thought of what people are made to endure that others may reap profits. Of violence the report says: "It is admitted that this disorder and lawlessness was incident to the strike. Its history is stained with a record of riot and bloodshed, culminating in three murders unprovoked save by the fact that two of the victims were asserting their right to work and another, as an officer of the law, was performing his duty in attempting to preserve the peace."

This strike is historic in that it is the first one brought to a conclusion by the threats of a President, who used not only his great personal and official power to compel arbitration, but suggested that United States soldiers could open the mines if other means failed. This will always be the great precedent in the struggle that is now demolishing the ancient practice of non-interference.

Nineteen hundred and three saw the culmination of the civil war in the Colorado and Idaho mining regions. Major General Bates, detailed by the Federal Government to investigate, reported:

> I find that the disturbances both at Cripple Creek and Telluride amounted to insurrection against the state of Colorado, in that mining and milling and other business was suspended there by reason of intimidation, threats, and violence, and that civil officers were not able to, or did not, maintain order.

In 1905, the teamsters of Chicago attempted an embargo upon all traffic in the metropolis, because nineteen union tailors, dismissed by one of the large concerns, were not reinstated. It was a pretty effective embargo for a while, characterized by assaults and murders. One poor fellow who was beaten lived long enough to give information as to his assailants, and they confessed to getting $15 for the assault, $2 cash, the rest on delivery of the goods. The hirelings

outdid their instructions; they were only supposed to maul, not murder. It appears that this money came from a fund voted by the union for "educational purposes."

ENTER THE I. W. W.

The strike at McKee's Rocks, 1909, was a deadly affair. The International Workers of the World were in evidence, and a warning was sent to the state constabulary that the rule, "an eye for an eye, a tooth for a tooth," would prevail; that for every striker killed a trooper would forfeit his life — and they collected their grewsome toll. In one skirmish ten strikers were shot; an equal number of soldiers paid the penalty of revenge.

The Columbus Street Railway strike of two years ago was one of the bitterest in our history. The men had some differences with the company pertaining to wages and the dismissal of several conductors. The company disdainfully refused to negotiate with a committee of their employees and the strike followed. Strike breakers were employed; the National Guard encamped on the State House grounds, and gatling guns were mounted near the Supreme Court building. An eye witness describes the seige:

> We made a midnight automobile tour of the city. It was about as near to actual warfare as we hope to get. An armed man on either side, and two more in front, each carrying a searchlight constantly playing on the tracks and sidewalk, seeking bombs. At the Gay Street Power Station, we stopped and made a circuit of the building. A guard carrying a repeating shotgun loaded with buckshot gruffly stopped us and demanded the countersign. Four more guards, likewise armed, were found on duty and awake.
>
> The Spring Street Station resembled a fortress in a state of seige. This is the heart of the whole system and is guarded night and day by twenty men. Rows of arc lights on either bank make the stream as light as day, and a cordon of pickets have orders to stop all boats that pass at night. Should an enemy assault *en masse* and carry the first line of fortifications, a warm reception would meet them from inside the station. Through the boiler and engine rooms are pipe lines connected to the base of the economizer, and water at 190 degrees can be thrown in one and one quarter inch streams a distance of 160 feet from the building.

Six hundred arrests were made during this strike. It is worth noting that the Socialist vote in Columbus increased from less than 1,000 in 1910 to 11,162 at the election following the strike.

PERSONAL PLAINTS OF EMPLOYERS

These are some of the larger battles that have been fought in this industrial war. Let us recall a few individual experiences which give the story in great detail.

Mr. F. C. Caldwell, president of the H. W. Caldwell & Sons Co., a machine manufacturing company in Chicago, a gentleman who has devoted himself earnestly to the labor question, relates the following experience:

> About ten years ago we had a strike. It was a complete surprise to us and a great disappointment, for we had always prided ourselves that our men were better paid and better treated than others in this district. The men were working fifty-four hours a week, so distributed that they had a half-holiday on Saturday. They demanded, through the business agent of the union, a straight nine-hour day, including Saturday. I have never been able to explain the reason for this strike excepting that it was a part of the eight-hour campaign and an attempt completely to unionize our shops. If we had granted their request, the next step would have been a Saturday half-holiday on the nine-hour basis. There was very little violence — some picketing, but no disturbance worth mentioning. It is needless to say that we blamed the union agitators for this trouble, and have been running open shop ever since. We have joined the National Metal Trades Association and the National Founders Association. We have no difficulty in getting good men. I have reluctantly come to the conclusion that in the event of labor trouble, union workmen will place their allegiance to the union above their loyalty to their employer, no matter how long and pleasant has been their employment.

Mr. Samuel M. Vauclain, general manager of the Baldwin Locomotive Works, Philadelphia, related the story of his experiences. The Baldwin works employ 15,000 men, and are famous not only for the quality of their product, but for their serious

attempt to foster the interests of their employees. Their apprentice system was for years a model; their benefit association, evolved through long experience, is established on generous lines; the physical environment of the men is carefully looked after, and the management has always attempted to keep in personal touch with the men, through its foremen and manager. Mr. Vauclain is himself a product of the plant, worked his way up, understands the men and the problem of shop management, and possesses that rare personality which is essential to the management of so great an industry, a combination of firmness, geniality, humaneness, and executive talent. His men call him "Uncle Sam." He said, in answer to my questions:

We have had two strikes, one in 1859 and one last year. I don't recall much about the first one, the one last year was a bad one. We suddenly found out that our shop was unionized. We said nothing, but quietly investigated to find out how deep the virus had gone. Then we met the situation. When the unions came to make demands, we firmly told them that we could not recognize them as interferers in the business. Well, they struck at our busiest time. They picketed the works, they tried threats and violence. We had a rather uphill time for a few weeks, but we won out, and have not taken the agitators back. Some of these men had been with us a long time; we always treated them fairly, paid high wages, and I firmly believe most of the men struck contrary to their personal wishes, but were wrought up by the union agitators. It had to come. The thing is in the air. Political demagogues and labor demagogues got the men excited. Some of my best mechanics came to me and told me they would rather stay with us. I told them they were men, and ought to be able to stand up for what they believed to be right. I believe in treating the men as individuals; I don't believe in any go-between. They can see me at any time with any grievance. I believe in paying a man what he is worth, that is, by the amount of work he can turn out in a day, and in letting him know that his efforts are appreciated. No, sir, we have no labor union shop. We have an American union shop, where everybody is welcome who can work his stunt, and over which the stars and stripes can float without contradicting the sentiment of freedom that rules in this shop.

In 1906-7 there was a strike in the Allis-Chalmers plant, Milwaukee. One incident of this strike will throw some light an another phase of the labor war. I take these facts from a pamphlet written by Mr. John P. Frey of the Iron Molders' Union, who quotes at length from the court records. I was told that the records of this case were also presented to the Congressional Committee on Labor this year.

On February 19, 1907, Peter J. Cramer, a member of the iron molders' strike committee, was assaulted during the course of this strike and, in December following, he died from the injuries received. An inquiry was made, and in March, 1907, the molders' attorney "succeeded in uncovering a part of the conspiracy to slay union men" and he instituted proceedings in the Circuit Court of Milwaukee against the company, its manager, the foundry foreman, and a number of the detective agency's men.

The records of the examination of witnesses in this case disclose that strike-breakers brought to Milwaukee were paid by the detective agency to assault strikers. One of these "guards" testified that he and another "guard" were offered "five dollars, if we went out and beat up K." K was a striker.

Another witness described the weapon used by the gang that beat up Cramer. "As near as I could tell, it was a half inch pipe with a hole in it, about that long (indicating about two feet): there must have been at least five or six pieces of pipe in that bunch" — meaning the gang that did the slugging. Further describing the details, the witness said: "Why, they kept just beating him as fast as they could and got him down to the middle of the road, and after he got there he ran down the middle of the road and N. pushed him away." N. was of the attacking party.

Question: "Can you tell how many were in that crowd?"

Answer: "As nearly as I can tell, eight or nine."

Question: "All hitting Cramer?"

Answer: "Yes, every one of them."

The witness was a strike-breaker.

So these pages could be filled with experiences, disclosing the bitter, bellig-

erent nature of the conflict. It is not the purpose of these articles to make accusations. Neither side has a monopoly on virtue and forbearance. The causes that prompt strikes and lockouts do not always lie on the surface. It is easy to bring examples of haste on the one side and greed on the other — of sweated conditions, such as recently have been disclosed among the women workers in the Auburn twine works of the Harvester Trust; of overworked men, such as the engineer of a great steel mill who worked in the engine house which supplied water to the plant, twelve hours a day, seven days a week, for twelve years without respite.

It is also easy to exaggerate this violence. Mr. John Mitchell says that "the amount of violence actually committed is grossly exaggerated and that which is fairly traceable to the *officials* of trades unions is almost infinitesimal." And Mr. Gompers protested to me that the acts of violence were exploited in the press, but the hundreds of acts of peace — the conferences, agreements, etc. — were never mentioned.

The fact however, remains that there is violence, that strikes do open the doors to the mob, and that not even the highest and ablest union *officials* are able to check the tide once it has gathered momentum. *The public sees soldiers and mounted constabulary called to put down war in time of peace: and sees the court records filled with the testimony of dastardly assaults.*

THE BAN OF THE "SCAB"

There is another weapon which is more cruel and more powerful than dynamite, and which is freely invoked by the contestants. No one realizes the effectiveness of ostracism as a war measure, until he has come into touch with its victims. It is the subtlest and deadliest of poniards. Banishment from social intercourse is the most poignant of social pains. Many workmen have told me they that joined the union because they wanted to be in fellowship with their neighbors, a perfectly natural instinct. "Scab" is the death brand that union orthodoxy places on the brow of the militant non-comformist. An experienced "strike-breaker" told me that he has seen men shrink from this word, who were not afraid of guns and cudgels.

Society sometimes rewards a "scab." During the waiters' strike in New York this spring, big tips were handed the strike-breakers in the fashionable hotels; and last year I saw generous gratuities given in England to trainmen who remained on duty while their comrades struck. The newspapers give wide publicity to these events. But the companions of these men will never forgive their treason.

The ban extends to the "scab's" family. The word itself is the most horribly expressive in our language. It suggests running sores, abhorrent festers, revolting stenches. During the fever of a strike, this potent expletive has shattered friendships, split congregations, and broken promises of marriage. During the anthracite strike the children in one of the affected districts refused to go to school to a teacher whose aged father was watchman in a mine and remained on duty when the men walked out.

The boycott extends this ostracism to the town and the neighborhood beyond the limits of personal acquaintance. The necessities of life are often denied strike-breakers; dairymen have been known to refuse them milk, bakers to deny them bread, bartenders to withhold them beer, even the church has hesitated to offer the consolation of faith to the dying, and undertakers to refuse the burial of their dead.

This is industrial war using social weapons. When you stop to reflect upon it, you feel that this is as terrible as Fate. Charity can alleviate poverty, but what charity can cover the shame of a spurned personality? The history of the Bucks Stove case shows how utterly ineffective is all the devised machinery of government against the silent conspiracy of determined human hearts.

The blacklist is the employers' retaliation. It is as silent, relentless, oppressive, cowardly, and effective as the boycott, and as little within the reach of the courts.

Experience has systematized this guerrilla warfare. The workman has perfected his organization so that the blow of a whistle, the uplifting of a hand, can silence a great mill. He has strike funds, his brethren all over the country contri-

bute to his support when the strike is important or lasts a long time. Some of the great strikes have been managed with rare skill.

And the employer? So intense is the individualism of the business man that it took a long time to teach him the necessity of defensive association, and even to-day there are comparatively few branches of business compactly organized for fighting. "We prefer to go our own pace, and fight our own fight," the manager usually tells you, when you ask why he doesn't join his competitors against what they call "the tyranny of the unions."

PROFESSIONAL STRIKE-BREAKERS

In truth, the employer relies on a new trade to fight his battle, the trade of "strike-breaking." There are large detective agencies which make it a business to furnish "union and non-union men and women of all trades for secret service work for locating 'disturbers'," as one of them advertises. These concerns have reduced strike-breaking to a science. One firm advertises guards for protecting property and life during strikes and lockouts. "These men are all above six feet in height, and are selected for their ability to handle this class of work." And again: "secret men attend all meetings and report proceedings. The service possesses the necessary equipment, such as Winchester rifles, police clubs, cots, blankets, etc., to handle any sized trouble." The naïve frankness of this circular leaves little for the imagination to supply.

"Where do you get your strike-breakers?" I asked one of these experts.

"They are a wandering class. Some have a past, some are ex-union men who went to work contrary to instructions and were ostracised, moved away from their old home, and are doing this as a sort of way of getting even with the unions. Most of them love adventure and, when the danger is over, get restive. I have had them come to me, after things got quieted down on a job, and ask, 'Say boss, ain't there some place where there is something doing, it's too church-like here.'

"They get their fun out of the danger, are used to guns and clubs, and can hit hard when necessary. They have a sense of loyalty that is remarkable. They obey orders like soldiers, and you can't tell me they do this just for the money there is in it. I have been followed many times, have had five men attack me in the dark, have had a price on my head, have had my men followed by four or five to each man. I have had men clubbed, stabbed, and shot; and their orders are to return the compliment. I have sent men out of besieged works with orders to do business, if they were attacked, and I have myself used the gun. It is war and excitement, and when a bunch of infuriated men are after you, you use the weapon and don't shed tears."

Thus our highly specialized "civilization" provides the excitement that elated the border clans, picturesque brigands, and jolly musketeers of a more "barbarous" age.

THE FUTILITY OF LAW AND FORCE

And what does our be-praised society do? Three things.

It sends soldiers. That is always the first resort of an agitated public. Bayonets soothe the palpitations of the bourgeois heart. This is having some interesting results in America, where there is no standing army to speak of, and where the soldier is also the voter and often the striker. In the Boston elevated strike this spring, it was discovered that in one regiment of local militia 60 per cent. were union men; and in one company of 65 men, 54 were union and 40 were strikers. During the riots at Reading, in 1877, when ten men were killed and 40 wounded in one riotous night of fire, an entire company of militia refused to go out against the mob, and some of the soldiers were suspected of handing their ammunition over to the rioters. Governor Hartranft disbanded the company for insubordination.

Some unions forbid, in their constitutions, their members belonging to the militia, except in case of foreign war.

Then, we resort to the courts. The law tries to maintain an equipoise between combinations of capital and of labor. Neither side shall conspire to harass or destroy the other. It's a fine ideal, but

it doesn't work. In spite of injunctions, anti-boycott and anti-trust laws, where have we arrived? And in spite of all our decrees and decisions, is it not common knowledge that blacklists, boycotts, and conspiracies exist daily? Equality of opportunity in the face of bread and butter frenzy imposes a heavy task on justice. Our courts are just now passing through a crucial period. A judge with a constitution in his hand is delegated to be the arbiter in a war of force, not a war of reason; a contest of passion, not a matching of syllogisms and precedents.

He must call on force to execute his judgments. Therefore, constables and soldiers. One thousand freight cars were burned in Chicago in spite of equity jurisdiction, which "guarded," by a writ of injunction, 50,000 miles of railway!

We might as well admit it: it is legal chaos. We learned half a century ago, after Dred Scott, that there is a higher court than the Supreme Court.

And finally Society investigates. That is really the newest of the Public's activities. The Government, state and federal, appoints a commission, to investigate and tell the Public all about it. So after Homestead, and Buffalo, and Pullman, and Pittsburg, we have volumes that lay bare conditions which make you shudder at the heartlessness of man. These revelations are of great value, because they give the Public a solid basis for action which alone, in the long run, will bring both sides to their knees.

But we investigate *after* the blood is drawn and the tears are shed. Our investigation is an autopsy, not a diagnosis.

(The third article of this series will appear in January).

THE INASMUCH MISSION

MAKING OVER LOST SOULS FOR $2.60 APIECE. A WONDERFUL WORK BEGUN BY FOUR HOBOES

BY

BLAIR JAEKEL

"Inasmuch as ye have done it unto one of the least of these, my brethren, ye have done it unto me."

DURING the winter of a couple of years back four apologies for men became acquainted at one of the several missions in the tenderloin of Philadelphia. Each was dissipated and disheveled, unshaven, unkempt, and saturated with liquor. Each had floated about the country for years, knowing no home, no friends. Each bore the unmistakable hallmark of the "hobo," and each had come to the city on the "hobo's" common carrier, the freight train, or had ridden "blind baggage" between the mail cars of the "Limited." Each was a "bum" of the uttermost, guttermost type.

Arthur W. Taylor was a college man. He had been brought up in a Christian household by Christian parents. His ability had crowned him with early success and before he had turned twenty-five he held a high-salaried position as a traveling accountant for the Standard Oil Company. But the subtle, mysterious workings of rum "got him." He lost his position; his friends discarded him. He took to "the road," and for years he followed the tramp routes of the continent.

A scion of one of Virginia's oldest families was the second of the quartet, George A. Tyler. He lived respectably with his wife and family in a quiet Southern town. An associate with his father in the lumber business, prominent in church and social circles, he had everything to live for. An occasional drink at his club started him on the downward path, and little by little he lost his self-control. In time even the environment and responsibilities of his home had no influence. He left town,

after five years of active business life, and fell rapidly to the level of a common tramp, roaming over the country and begging enough money with which to satisfy temporarily his thirst for strong drink.

Randolph M. Lawrence was a civil engineer. His parents were wealthy, and at the time he commenced his career his prospects for the future were far brighter than those of the average man. Unfortunately he acquired the habit of drink. Through the medium of various so-called "cures" he tried in vain to stop. Finally he left home rather than bring disgrace to his brothers and sisters. For fifteen years he fought; but when he rode into Philadelphia on a freight, discouraged at heart and emaciated in body, only the cheapest and most virulent brands of whiskey seemed to appease his ever-increasing craving.

The only one of the four who did not fall was George Long. Born and brought up a true son of the tenderloin, he had nothing to fall from. At fourteen, having been already thoroughly schooled in the ways and means of the underworld, he launched himself upon his career as a "grafter." He soon acquired the uses of cocaine and morphine as stimulants. He told me he had been a "sniffer" and that the cartilages of his nose were eaten away from sniffing the drug, as a man would use snuff. For twenty years he had been an habituè of the dens of vice in the large cities. He knew his Chinatown like a book, and under the somnolent influence of opium he often spent weeks at a time in the mole holes of the Chinese segregations. After a while the sight of him became repellent even to the keepers of the lowest resorts, and he had been thrown out time and time again from the filthiest brothels in several cities. Long was married last December, and he told me that his wife was the only decent woman he had ever known. He has not touched drugs or liquor in three years, and he has built himself up in weight from 118 to almost 200 pounds.

THE INASMUCH ASSOCIATION

At different times these four men came to a little mission on Vine Street. Taylor, Tyler, and Lawrence still had hopes of gaining their self-respect. During the brief and infrequent lapses of sobriety, remorse brought them to the mission. To Long, the workings of the mission were not entirely new. Still he came principally out of curiosity — and to beg enough money to buy his "dope." How these four men were converted is another story; but through their conversions they came to know each other. They told each other the histories of their lives. A common sense of sympathy seemed to bind them together, and they became nightly visitors at the mission and its services.

They told their stories to some of their friends of the underworld, and their success in inducing a number of these to try the "new cure" and accept the Lord Jesus Christ encouraged them. They met one evening and formed what they called the "Inasmuch Association," the original platform of which they drew up as follows:

> We, with all humility, being four men who have been to the very gates of Hell, and who, only through the gracious love and saving power of our Lord and Master Jesus Christ, have been redeemed, herewith, this first day of February, 1911, consecrate our lives to Him and His work. Our object and endeavor shall be, by the love, grace, and power of God, through His son, Jesus Christ, to redeem the fallen, giving aid, help, comfort, strength, and sympathy, both material and spiritual, to the needy, and to do His blessed will, as He reveals it to us at all times and at all places, to hasten the coming of His Kingdom.
>
> (Signed) Arthur W. Taylor
> George A. Tyler
> Randolph M. Lawrencf
> George Long.

No other field in Philadelphia appeared to be half so worthy of their attentions as "Hell's Half Acre," a small section between Tenth and Eleventh streets, south of Walnut, which for years had harbored the lowest dives in the city. They descended in a body upon "Hell's Half Acre." They soon discovered that it needed a mission and decided to found one despite the discouragement of the civil authorities based upon the many previous failures in the same field, and against the advice of a number of charitably inclined Philadelphians.

But where and how were they to obtain the location for such a mission in this congested "Hell's Half Acre," where even stuffy little two-story, three- or four-room houses, for which $12 would seem almost exorbitant, were renting for from $40 to $65 a month? Their financial capital in the aggregate amounted to twenty-seven cents. They had faith a-plenty, but no money with which to pay rent.

THE GET-AWAY HOUSE

There happened to be a block of twenty vacant, ramshackle houses on Locust Street, below Eleventh, owned by Dr. George Woodward. Not many months before, these houses comprised a little colony of vice in themselves. Each was connected with the other by an underground passage, so that if a crime was committed in one, the perpetrator could easily make his way from that house to another, and so on to the street and to safety. One building in the group was known locally as the "get-away house" by reason of its numerous secret exits, and many were the shady deeds that had been laid at its door. All these were vacant for two reasons: that the owner at that time refused to rent them for immoral or illegal purposes was the first; the second was that no respectable family cared to live in the district.

The quartet of one-time tramps called upon Dr. Woodward. They told him their plan and made known their needs. Having been discouraged in their project by a host of others before Dr. Woodward, it was no great surprise to them when he appeared skeptical. But they so convinced him of their sincerity and of their belief in the ultimate success of the "Inasmuch Mission" that he finally placed all twenty at their disposal rent free.

Elated with their success the quartet returned to 1019 Locust Street, took possession, and commenced forthwith to clean house.

From this house and from the little brick buildings in the rear they carted out during the next few days eleven wagon-loads of beer bottles, playing cards, discarded frills and burbelows of feminine wearing apparel, and other rubbish. They scrubbed and cleaned the walls and ceilings, all the while depending upon charity for their very existence. They fitted up the first floor of the corner house as a chapel, and here, on March 24, 1911, they held their first meeting and consecrated the work of the Inasmuch Mission to God.

These four men — through their own efforts and the assistance of voluntary contributions, not only of money, but of wearing apparel, edibles, and furniture for the mission — determined to help any man in need, providing that the beneficiary showed the desire to help himself. They believed that a good wash, a rest, and a palatable meal made a man a better subject for religious effort and more likely to assert his own manhood; for experience had taught them that to turn a man out into the world, homeless and hungry — a man recently urged by them to rely on God's goodness and promises, and assured of a higher, better life — was little short of criminal. They would not resort to coercion to secure a profession of faith, and no material inducements would be offered to those redeemed. They knew from personal experience every scheme and subterfuge of the impostor, and they believed that, by a sane, sympathetic study, through daily association, of those who had been restored to a semblance of their normal selves, they would be able to select the "wheat from the tares."

TO CLEAN HELL'S HALF ACRE

Incidentally, they pictured to themselves a "cleaned up" "Hell's Half Acre."

Odd jobs about town first were found for men who wanted to work. Then the missionaries explained to Mr. A. F. Huston, of the Lukens Iron and Steel Company at Coatesville, Pa., and chairman of the evangelistic committee of the Presbyterian General Assembly, the need of permanent places for these rescued men. The Lukens mills needed men. As an experiment, the mill agreed to take forty and to pay their fares from the mission to the mills; and for their accommodation the company purchased an old mansion, long since vacated and fallen into disorder, furnished it with cots, provided a reading room, baths, dining room, and a kitchen.

Almost every one of these forty first recruits has lived up to his promises.

For the first short six months of its life, the attendance at the services of the Inasmuch Mission totalled 14,089; 8,731 meals were served, 2,007 lodgings given, and positions were found for 96 erstwhile vagrants. The average attendance at the Sunday-school conducted by the founders of the mission was, in six months, 53 children, white and colored, a large majority of whom did not know before what a Sunday-school was. And, as a sort of a by-product of its work, the mission during this time was instrumental in closing eleven disorderly houses in "Hell's Half Acre."

The Inasmuch Mission to-day occupies eight of the original twenty houses placed at its disposal by Dr. Woodward. Twelve have been demolished, and on the site the mission has erected a tent in which are held the nightly meetings during the summer months. Usually some prominent minister or social worker will be invited to make the principal speech of the evening. Invariably Long or Mitchell, an early convert and now a co-worker with the founders, speaks to the men, and a number of the men themselves give their testimony. Nor are the meetings patronized solely by vagrants, past and present. Men and women from many walks of life in sympathy with the work of the mission will be found rubbing elbows with the lowest rum-soaked "hoboes."

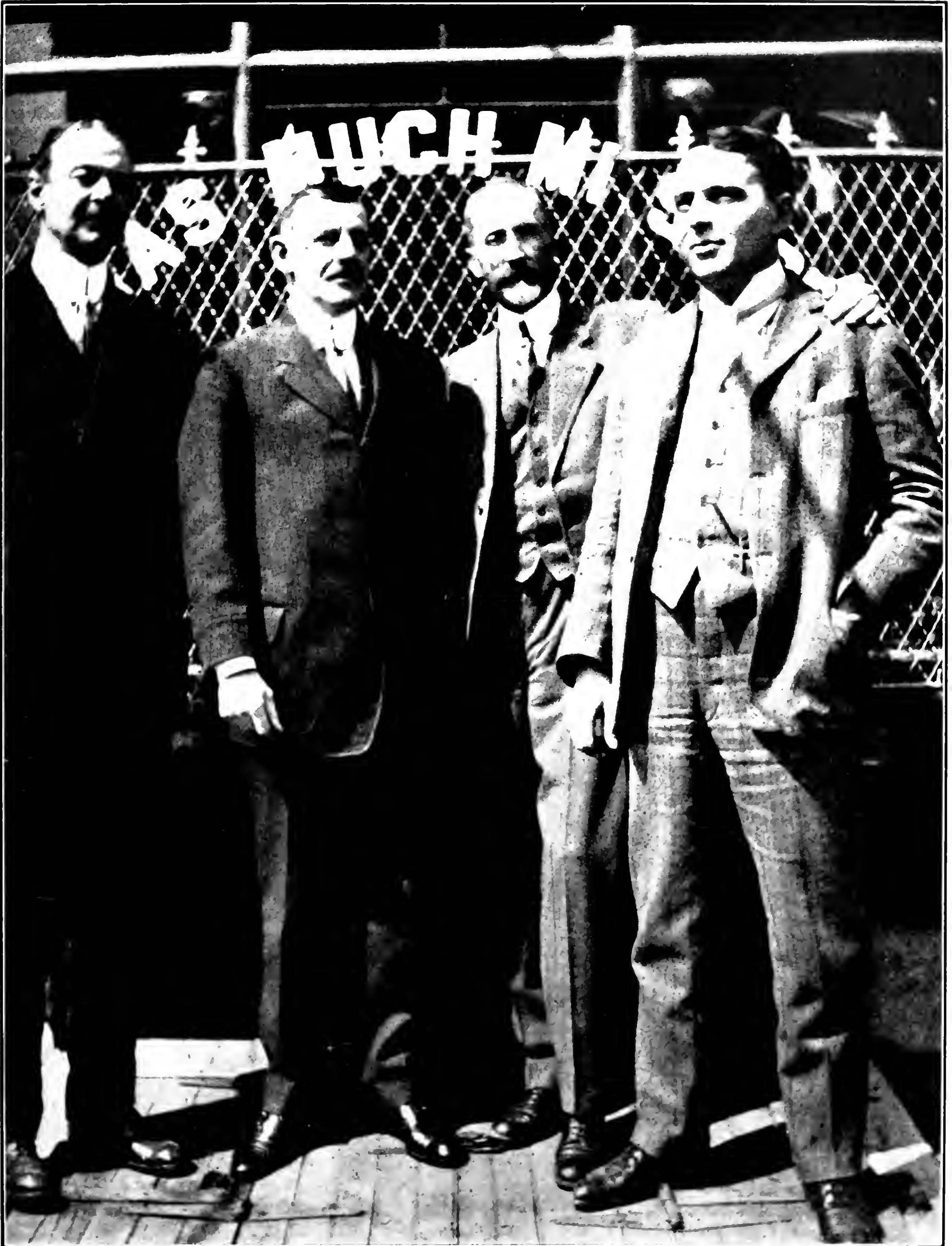
During the mission's first year Taylor gave up the work to prepare himself for the ministry and to start another mission in the Southern mountains, and Lawrence's health broke down so that he was compelled to leave to live with his sister, in West Virginia. Since then, until very recently, Tyler and Long have been carrying on the work. Tyler has now gone into business with his father. Long, the only one of the four left, carried on the work, ably assisted by his wife. Mrs. Long is the business head of the firm. Married last December, she resigned her position as a private secretary in New York City and went to Philadelphia with her husband to live in a building which, before the existence of the mission, had been the hub of "Hell's Half Acre." She gave up her independence, her home, and her friends, to live upon charity in the thick of the tenderloin. This is self sacrifice and it takes abiding faith in a husband and full and lasting sympathy in his work — especially when the husband up to two years before his marriage actually subsisted upon sin and intemperance.

The second floor front room of the house at the corner of Locust and Warnock Streets is the executive chamber of the mission. It is also the Long bedroom, very plainly furnished, but very neat and very clean. Below on the first floor is the chapel, in which the nightly meetings are held during the winter months, and a little waiting room fringed with benches. Back of the waiting room is the wayfarers' dining-room; back of the chapel is the narrow kitchen, and back of the kitchen the officers' dining room. And, mark you, the place did not contain a single article of furniture when the four founders took it over. Piece by piece, everything has been donated voluntarily — crockery, cutlery, chairs, beds, bed linen, gas stoves for the kitchen, and all.

A VISIT TO THE MISSION

Perhaps when you make your visit Long will be at his little square desk upstairs in the bed room, arranging for a Bible class or preparing a list of men who have asked for work. The cook raps on the screen door and announces that "there's a couple o' bums below that want t' see th' boss." So "the boss" drops his work and descends the narrow stairs to the waiting room. He talks to the men — and herein lies a great part of the secret of the mission's success: he can talk to them in their own language. The worst that they have been, Long has been that and more. He knows by experience not only the language, but all the vicissitudes of "hobo" life. There is hardly a "bum" in the whole register of vagrancy, crime, and intemperance who can talk over the head of Long.

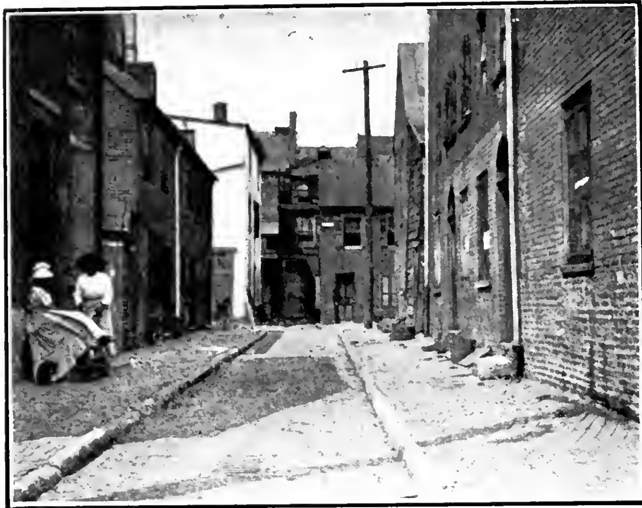
If the men seem sincere and express their desire to try at least to lead a better life — if they will but promise to help themselves, Long will promise to help them. They will



THE FOUNDERS OF THE INASMUCH MISSION

MR. ARTHUR W. TAYLOR, MR. GEORGE A. TYLER, MR. RANDOLPH M. LAWRENCE, AND MR. GEORGE LONG, THE FOUR FORMER "BUMS" WHO, POOLING THEIR ENTIRE CAPITAL OF 27 CENTS, IN MARCH 1911 STARTED A MISSION IN PHILADELPHIA'S TENDERLOIN THAT SHELTERED 11,000 HOMELESS MEN AND PROVIDED 1,200 MEN WITH WORK DURING THE FIRST YEAR OF ITS EXISTENCE

be introduced to soap, escorted (if in summer) to an improvised shower bath installed on the premises, or (if in winter) to the public baths, and told to scour themselves as they never have scoured before. They are given clean garments, and asked



"HELL'S HALF ACRE"

THE HEART OF PHILADELPHIA'S "RED-LIGHT DISTRICT," IN WHICH THE INASMUCH MISSION IS LOCATED

to wash the ones they just took off. At supper they sit down to a plentiful meal, plain, but well prepared. In the evening they attend the tent meeting. After Long has investigated their cases thoroughly and believes that they mean to try the new life, they are kept at the mission without the slightest charge until positions are found for them.

In the little brick buildings back of the mission, including the "get-away house," their dilapidated walls all but built up against it, are the third and the second grade sleeping quarters for white men and the "Jasper Ward" for Negroes. As a man betters his sanitary and his spiritual condition, he is promoted, one might say, from the third to the second grade, then on to the first, located on the third floor of the mission building proper.

It is a great work which Taylor, Tyler, Lawrence, and Long began and one for which they were peculiarly well fitted. With them there was no guess work. They did not have to imagine the predicament of an inebriate alone in the world. They have been through it all themselves. Therein lay their secret. They had no financial backing with which to begin the work. They were dependent entirely upon their own efforts. They received no salaries, and even the clothes on their backs had been given them. They derived their compensation in the form of encouraging letters from the men whom they had helped — men, some of them, who never did a stroke of work before they came under the mission's influence.

The mission keeps accurate accounts of receipts and expenditures and submits them to an advisory board for its approval and direction. All contributions are absolutely voluntary and there is not the slightest hint of an industrial feature connected with the mission. It does not look for support to any church, society, or charitable organization; it is unsectarian, and it splits no hairs as to race, creed, or color. As far as possible it follows up the careers of the men whom it has helped; it encourages them in the new life, and stands between them and temptation.

As I stood talking to Long one day in the "back yard" of the mission, a clean shaven, respectably dressed young fellow came through from the kitchen. Some weeks before he drifted into the mission and had been given a position in Coatesville with the Lukens Iron and Steel Company.

"Hello, Ed," said Long.

"Hello, Mr. Long," said Ed. "Had a day off and just thought I'd drop down to look the place over."

"How are you getting along, Ed?" asked Long.

"Fine," Ed replied; "three weeks and two days to-day since I've had a drop of booze."

"That's good. How are all the boys up in the mills?"

"Oh they're gettin' along fine. Half a

THE MEETING TENT

ERECTED ON THE SITE OF TWELVE DEMOLISHED DIVES AT THE BACK OF THE MISSION, WHERE NEARLY 2,000 CONVERSIONS HAVE BEEN MADE

dozen or so of the last batch took to the road; but the rest stuck. Well, I see you're busy," Ed apologized; "talk it over with you later. I'll be hangin' round 'til train goes up this evenin' after tent meetin'."

Then take the case of Jimmy, for example.

Jimmy was a human rodent; he was a wharf rat. Something more than thirty years ago he had been born down along the river front. Wherever he found himself when he felt sleepy, there he slept — in areaways, on cellar steps. For clothes he wore the rags and cast off garments he could beg, borrow, or steal. He ate a certain amount of solid food whenever and wherever he could get it, but for the most part he seemed to subsist upon cheap and poisonous liquor. He wandered over "Hell's Half Acre," by rote, daily.

One day as Jimmy was meandering up Warnock Street, full as usual, yet fearfully empty, he lurched against the screened kitchen door of the Inasmuch Mission. The cook was preparing a meal, and, as soon as he smelled it, Jimmy commenced to howl for nourishment.

"Hey, boss," called the cook, "look what blew in. What'll I do with ut?"

When "the boss" looked at Jimmy he decided that in his present condition he could not eat anything. But Jimmy decided as promptly and as emphatically too that he could; so a sandwich and a cup of coffee were got ready and handed out to him.

THE "GET-AWAY HOUSE"

SO CALLED BECAUSE OF THE SECRET EXITS BY WHICH ITS CRIMINAL HABITUÉS IN THE OLD DAYS COULD ESCAPE TO THE STREET — NOW CONVERTED INTO SLEEPING QUARTERS FOR HOMELESS MEN

"What's your name?" asked Long, after the sandwich and coffee had disappeared.

"Jimmy," said Jimmy.

"Jimmy what?"

"Just Jimmy."

"Well, Jimmy," said Long after a pause, "do you know that God loves you?"

Then this pitiable specimen of humanity looked up for a moment, caught the friendly, sympathetic smile on Long's face, and broke down and cried like a child.

The mission took Jimmy in, cleaned him, clothed him, fed him again, and gave him a real bed to sleep in. He attended the tent meetings and matriculated in the course of better living. They needed a little help in the kitchen, so Jimmy was instructed in the fundamentals of culinary art. When Mr. A. J. Drexel-Biddle opened the summer colony of his Bible class out in one of the suburbs, Jimmy was engaged as cook, and as cook he has worked there all summer.

THE MISSION BOSS

MR. GEORGE LONG, THE ONLY ONE OF THE FOUR FOUNDERS STILL AT THE MISSION, WHO, THOUGH DEPENDENT HIMSELF ON CHARITY, HAS FED MORE THAN 32,000 HUNGRY PEOPLE IN ONE YEAR

In the Star family the Inasmuch Mission has wrought a marvelous change. A year ago Star himself was one of the lowest of the low, a cocaine fiend, an habitual drunkard, a gambler and petty "grafter." He was a barber by trade and used to own his shop in Washington, D. C. He lost his shop through drink and bad habits and moved to Philadelphia. Estranged and separated from his wife and child, he ran the gamut of the underworld. One night he drifted into the Inasmuch Mission and became converted. A position in a barber shop in the city was found for him. He stopped the use of drugs and liquor. He works from ten to fourteen hours a day, and in the evenings the Stars — as respectable looking a family as you would care to see — sit up on the platform at the back of the tent and lend their moral as well as physical support to the meetings.

On March 24, 1913, the Inasmuch Mission will celebrate, although not very lavishly, its second birthday. Its finances for the first year were as follows:

Contributions		$3,910.31
Expenses		
Furnishings and maintenance	$ 582.47	
Kitchen expenses	1,557.45	
Management	706.14	
Incidentals	1,025.57	
Total		3,871.63
Balance		38.68

Conversions believed to be sincere to the number of 1,453 were effected, from which item the founders have computed that the average cost to set a man with the right kind of stuff in him on the road to better things is exactly $2.66.

In this first year a total of 28,040 men and women attended the nightly services, 11,173 lodgings and 32,162 meals were furnished, and 84 children were enrolled in the Sunday-school. Through a gradual change in the sentiment of the neighborhood, and with the hearty coöperation of the present city administration of Philadelphia, forty-five disorderly houses in the district have been closed. Including a recent distribution of 400 men anxious to work, more than 1,200 one-time "hoboes" have received positions in and about the city, at Coatesville with the Lukens Iron and Steel Company, at Johnstown with the Cambria Steel Company, and at Pittsburgh with the Carnegie Steel Company. Executives of the Baldwin Locomotive Works in Philadelphia have notified the mission that they will take all the men it can supply.

The work of the mission has succeeded so well and has grown so rapidly that the problem which now confronts its founders is, "What shall be done with the new converts?" At the most, the dilapidated buildings as they now stand can accommo-

date but forty men. To send a new convert, spiritually, morally, and often physically and mentally unbalanced, out on the street and into the very jaws of temptation, or, if work be obtained for him in the city, to arrange to place him in any one of the cheap but unspeakably filthy lodging houses of the down-town district, is but to philander with failure, no matter how sincere the man may have been at the time of his conversion.

SUMMER PREACHING

MR. LONG ADDRESSING A CROWD IN FRANKLIN SQUARE AT ONE OF THE OPEN AIR MEETINGS WHICH IN WINTER ARE REPLACED BY NIGHTLY SERVICES IN THE NEAT LITTLE MISSION CHAPEL AT THE CORNER OF LOCUST AND WALNUT STREETS

A project for the solution of this is on foot. Appealed to by the founders of the mission, prominent Philadelphians have formed tentative plans for the building of an "Inasmuch Hotel," in which, although separate and apart from its management, will be housed the mission. The hotel, to be erected and operated after the Mills Hotels idea in New York City, will contain 800 rooms. The rate of each of these, with full board, will be four dollars or less a week. There will be plenty of bath rooms and reading rooms. The mission proper will occupy two or more floors, and 150 rooms will be at its disposal in which to quarter the new recruits until work is obtained for them. For these rooms there will be no charge whatever. This part of the work will be managed in the same manner and by the same men as it is to-day. But from the moment that work is obtained for a man he will be asked, even if his self respect does not demand it, to move into the hotel quarters and pay the usual rate. The new hotel is to be erected on the site adjoining the present mission and the transfer of ground has already been arranged for. It is estimated that the entire enterprise will cost less than $400,000 to put into operation.

The anomaly of it all is that this great work first took definite shape in the minds and hearts of four tramps who met by mere chance in Philadelphia's tenderloin.

TURNING BOULDERS INTO GOLD

CALIFORNIA TRANSFORMING WASTE INTO TRIPLE WEALTH BY EXTRACTING GOLD FROM THE TAILINGS OF THE FORTY-NINERS' PLACERS BY THE USE OF DREDGES, BY UTILIZING THE ROCK HEAPS FOR ROAD MAKING AND RAILROAD BALLAST, AND BY CULTIVATING THE CLEARED LAND FOR ORCHARD AND FARMS

BY

ARTHUR L. DAHL

ABOUT twelve years ago, in certain districts in the Sacramento Valley of California, were vast areas of boulder-strewn river washes, good only as rattlesnake ranches or gopher farms. Occasionally, some hardy citizen would try to entice a living from the thin soil, but he never grew rich from his labors. There were treasures, however, in these apparently worthless wastes. It only needed the magic touch of industry to bring them to light.

These lands were the dumping ground for the hydraulic mines of the gold seekers, and amidst the rounded cobblestones or huge boulders were yet tiny grains of gold that were too fine to be secured by the customary mining methods. But the problem of extracting them was finally solved by Mr. W. P. Hammon, then a small fruit grower of Butte County, and now nicknamed the "Dredger King." He devised a gold dredge that successfully extracted the gold. Dredges of this type multiplied and invaded new districts. In their work, they plowed up these river washes for miles, leaving great piles of cobblestones in their wake.

The dredged-over lands were considered as worthless as the lands were thought to be before the gold dredges began to operate. But the same men who made a success of dredging now turned their attention to converting the hard, granite stones into commercial concrete. They found that the rounded rocks were extraordinarily hard and durable. They said, "Why not crush them into ballast and road material?"

The attempt resulted only in putting the ordinary rock crushing machinery out of business. Then experts were put to work to devise a rock crushing plant that would do the work. After repeated experiments, and the expenditure of large sums of money, a plant was erected of the hardest steel, that could crush the cobble stones to any size desired.

This first plant was erected in the midst of the dredged areas left by the "gold ships." It enabled the operators to handle their product with the least possible expense, and thus to compete with the ordinary quarried stone of inferior quality. But the market for the new macadam was inadequate. The buying public was skeptical. The railroad men said the

ballast was too hard and rounded to knit properly. The dredge men said, "If you're from Missouri, we'll show you."

An experimental piece of track was ballasted with the new material. It soon proved to be the best track on the whole line. Soon the Southern Pacific was using dredge ballast on its lines from the Oregon boundary to San Francisco Bay. The other steam and electric railroads followed suit, and the demand increased until another plant was necessary.

Then new markets were sought. Building contractors were induced to try it in the construction of concrete bridges and other structures. Soon they were as enthusiastic over the new material as the railroad men. But the dredge men were not yet satisfied. There were thousands of acres of cobblestones waiting to be turned into macadam and a third plant was being erected to bring the daily output up to 6,000 tons.

Some of the country roads in the Sacramento Valley were not as reliable as they might be. They were either too dusty or too muddy. After a vigorous campaign for good roads in the vicinity of one of the crushers, the dredge people finally succeeded in having the county build a stretch of roadbed, twenty miles long, leading from Sacramento to Folsom.

Soon the entire valley was talking about that roadbed, its smooth and durable surface that withstood the large motor traffic and the heavy teaming to which it was subjected. This one piece of experimental road soon grew into a system that extends over many miles of the valley.

A GOLD DREDGE AT WORK IN A WHEATFIELD NEAR SACRAMENTO, CAL.

THE ENDLESS CHAIN OF BUCKETS AT THE RIGHT SCOOPS UP THE GOLD-BEARING DIRT WHICH IS MECHANICALLY SLUICED IN THE DREDGE. THE TAILINGS ARE THEN DUMPED AT THE LEFT

Another permanent benefit from the rock-crushing operations was this: After the cobblestones and boulders had been removed from the land and converted into macadam, it was found that the remaining soil was deep and rich enough to place under cultivation for fruit trees and grape vines; and soon sturdy orchards and green vineyards were supplanting the barren wastes.

These former "rattlesnake ranches" have now a three-fold value: First, they enable California to lead the states in annual gold production; second, by the utilization of the granite dredge tailings

A ROAD BUILT OF GOLD-DREDGE TAILINGS

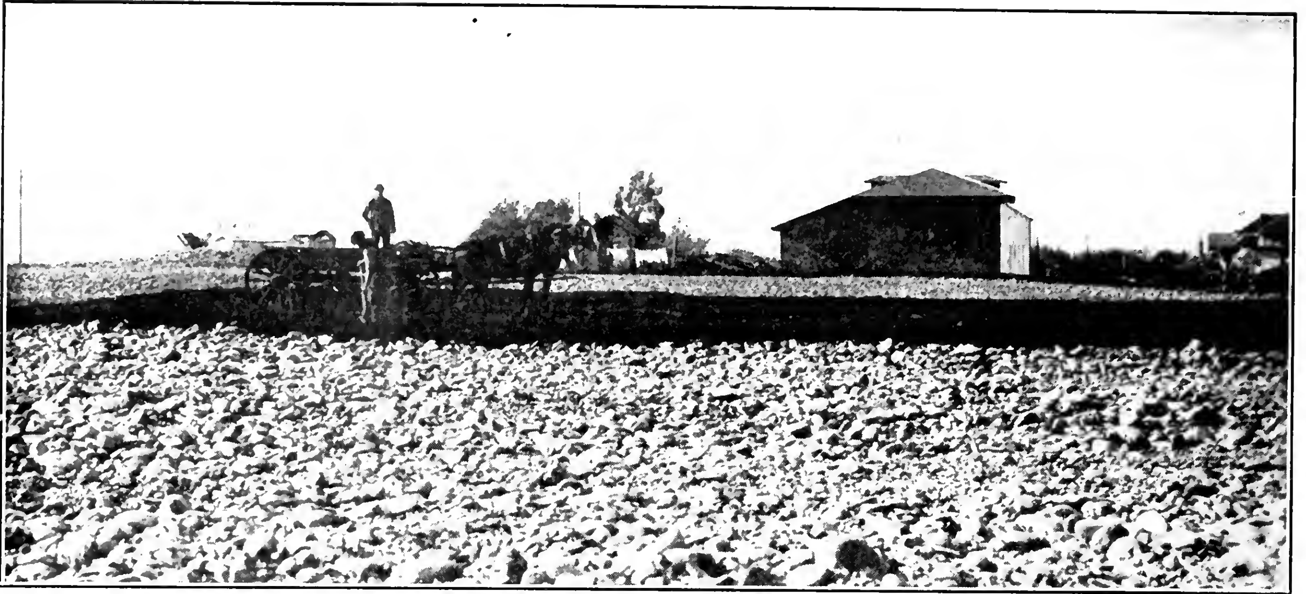
THE HIGHWAY FROM SACRAMENTO TO FOLSOM, TWENTY-TWO MILES LONG, ONE OF THE MOST PERFECT PIECES OF MACADAM ROAD CONSTRUCTION IN AMERICA

UTILIZING THE DREDGED FIELDS

BY PLANTING THEM TO ONE-YEAR-OLD EUCALYPTUS SPROUTS

THE SAME FIELD FOUR YEARS LATER

THE STONY WASTE TURNED INTO A HARDY FOREST OF EUCALYPTUS WHICH, IN A FEW YEARS MORE WILL BE WORTH THOUSANDS OF DOLLARS FOR TIMBER



ANOTHER METHOD OF RECLAIMING DREDGED LAND

BY SPREADING A THIN LAYER OF RICH SOIL OVER THE COBBLES THE GROUND IS MADE FIT FOR THE LAWNS AND TREES OF TOWN LOTS IN OROVILLE, CAL.

a great industry has been built up and good roads, at low cost, are now possible; and finally, the lands themselves are now converted into profitable orchards and vineyards — the everlasting bounty of the earth.

FROM GOLD DUST TO PEACHES

AN ORCHARD GROWN ON DREDGED LANDS THAT ONCE WERE SUPPOSED TO BE WORTHLESS BECAUSE OF THE THICK COVERING OF COBBLESTONES

ALONE ACROSS ALASKA

SKIRTING DESOLATE SHORES ON UNCERTAIN ICE — PICKING A TRAIL OVER SNOW-DRIFTED TUNDRAS AND UP THE LONELY YUKON — 1,000 MILES IN 21 DAYS WITH SLEDGE AND DOGS

BY

GEORGE F. WAUGH

FIRST LIEUTENANT OF THE TWENTY-SEVENTH INFANTRY, U. S. A.

I WENT to Alaska with the 16th Infantry in the summer of 1910. In the spring of 1911 I took my examination for promotion, but my assignment was held up. When at last it reached St. Michaels in late October, I was on the Kaltag Portage more than a hundred miles away, where I had been sent to begin work on the telegraph line to Old Woman and Unalaklette. As it happened, the boat bringing my orders was the last one to leave "the outside" (as they call the States in Alaska), until the latter part of the next June. There was no possible way for me to make this boat in time for the return journey and it was a case of remaining there until the following summer or of going out overland. As my order directed me to join my regiment, I decided to make the trip out by dog team in the dead of winter.

I was not afraid, as experience on hunting trips during the previous winter had given me a fair idea of what I might have to endure. And I had a new sled tent-cover that I had designed and was very anxious to test. This sled tent-cover, which resembles a large bag, is fastened to the body of the sled by snaps, with a door at the rear end next the handle bars, which is closed by a draw string. It is so made that the entire load is packed inside and, if properly lashed, it is waterproof — a convenience for which I have had cause to be thankful on more than one occasion. When I wanted to make camp or take refuge from a storm, all I had to do was to unlash the sled,

THE SIBERIAN RACING DOGS

"THEY WERE VERY LIGHT, AVERAGING ONLY THIRTY-SEVEN POUNDS, WHICH IS LESS THAN HALF THE WEIGHT OF THE AVERAGE NATIVE DOG, AND THEY DID NOT REQUIRE A THIRD AS MUCH FOOD"

PREPARATIONS FOR THE JOURNEY

FINISHING THE SPECIALLY CONSTRUCTED OAK SLED, WHICH, WITH THE ENTIRE LOAD OF CAMPING PARAPHERNALIA, FOOD, AND CLOTHES, WEIGHED ONLY 200 POUNDS

open the draw string, and crawl inside. My fur robe and extra clothing were packed on top of the load. I carried also, in an asbestos-lined box, a small sheet-iron stove and a bit of dry wood for use during ordinary weather and a small pocket alcohol stove, that I could burn with safety under cover in case I ran into a bad storm.

In preparing for the trip, the first and most important things to consider, I thought, were the dogs. I looked over such Siwash and huskie dogs as were for sale, but did not find a team that suited me. Dogs of these breeds are unsatisfactory even under the best conditions, because they are always fighting and crippling each other, and I could not run the risk of having a dog disabled.

After a long search, however, I had the good luck to secure five of the famous Siberian racing team, imported by Lord Ramsay for the Alaskan Sweepstake, which won the world's record non-stop run of 125 miles in 1910. They were very light, averaging only thirty-seven pounds, which is less than half the weight of the average native dog, and they did not require a third as much food. Their Siberian names were Liska, Psyriak, Belosky, Bliss, and Odella. They were very gentle and tractable. I drove double leaders, Psyriak and Liska, with Odella and Belosky in the wheel, and Bliss in the swing. If one of the leaders began to shirk, I would put him in the wheel for punishment, and it usually had the desired effect.

The next thing to consider was a sled. I could not find one of the size or weight I desired at St. Michaels. They were all too heavy and too large for one man with only five dogs. So I set about having one built. My hope was to construct a sled that would not weigh more than thirty-five pounds. Wherever it was possible I substituted oak for the customary heavy hickory. I used no bolts except to fasten the steel shoe to the runners; all the other fastenings were of romaine — a kind of skin string made from the hair seal skin — wrapped with string to keep the dogs from chewing them.

But for all my care, I did not succeed in reducing the weight below fifty pounds. The sled was of the basket type, about six feet in length, the runners extending eighteen inches to the rear of the basket, so that I could stand on them when the going was good.

Luggage was cut to the minimum, excepting socks, foot gear, gloves, and rations. I carried only half a towel and a quarter of a cake of soap. In spite of my efforts, however, the load including the sled weighed 200 pounds. For a sleeping bag I took a Government wolf skin robe. I carried a small medicine chest with the usual remedies and had matches in every conceivable place, even a few inside my camera, so that, no matter what happened, I could still have a fire. Besides my dry wood, I carried in my chain bag at the back of the sled a can containing little balls

of waste saturated in oil, a piece of candle, some matches in a waterproof case, a bottle of distillate, and some alcohol cubes that will burn in water; this insured me a fire under almost any circumstances. Lashed to the side of my sled, I had an ax and a large hunting knife. For provisions I carried hard bread, bacon, tea, sugar, and plenty of sweet chocolate for myself. For my dogs I kept only a reserve supply of dried salmon, because I counted on killing sufficient game for them along the trails. Next to clothing, my most important impedimenta consisted of a 30-30 carbine, a frying pan, a kettle, a pair of snow shoes, a compass, and a thermos bottle.

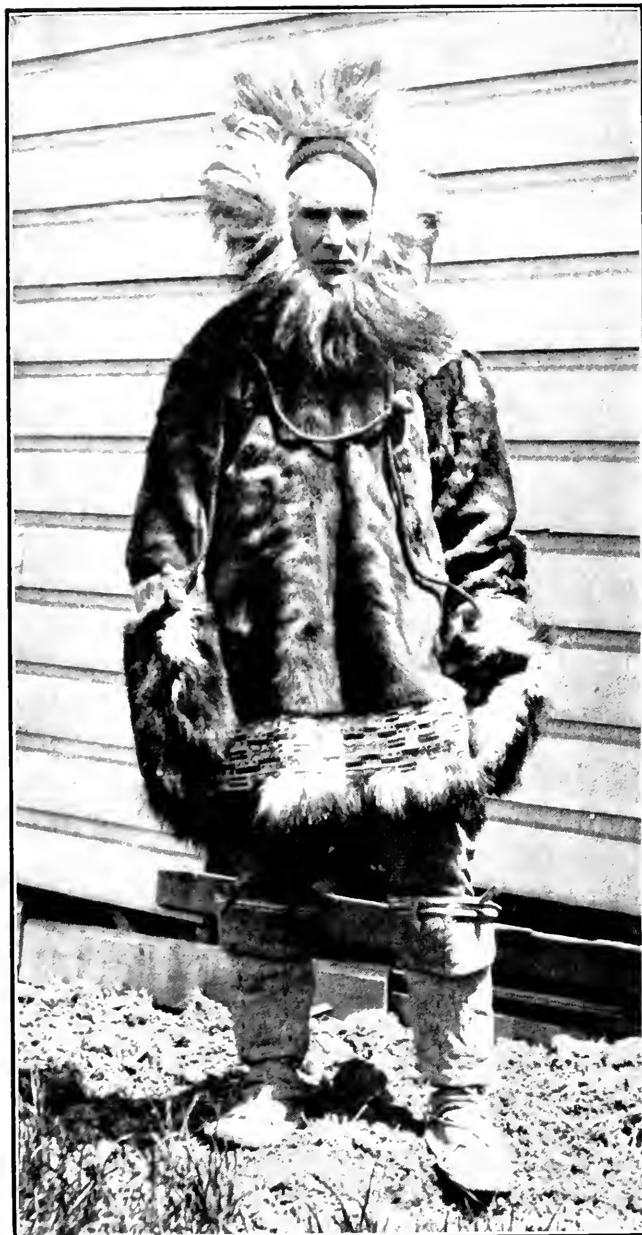
About a month before I started, I set about getting my team and myself into condition. I began by going for walks of from ten to twenty miles over the tundra, encouraging the dogs to cover as much distance as they would in their hunts after ptarmigan. After I was fairly hardened I would take them out with an empty sled. At first there was no snow, but the sled slipped easily over the heavy frost with which the grass was covered. At last, toward the latter part of November, we got our first light snow, and then I made daily runs of from thirty to forty miles, studying my dogs. The last of November the bay was frozen across and I decided to make the start.

On leaving St. Michaels I went in a northeasterly direction along the coast. From the outset, traveling was difficult. The little snow that had fallen was so badly drifted that it was necessary, in order to make any progress at all, either to plough through a six-foot drift or to haul over the bare tundra. Moreover, this part of the coast is especially unfavorable for travelers. It contains not a stick of timber nor a tree. The whole surface of the ground is a bog in summer, with here and there bunches of grass, called nigger-heads, which, in places, are three feet high with water between them. During the summer of 1911, which had been very dry, the tundra had been burned for miles and the ashes were like so much sand. I made only sixteen miles the first day and I felt very much discouraged and was almost on the point of giving up and returning to the post. The next day, however, I decided to try the ice, although no one had been over it that year and it was not considered safe. The native's test for salt water ice is to take a pointed pole and punch the ice three times; if the pole does not go through they will take a chance. This is how I felt my way across certain bays on Norton Sound.

The second day out, although I remained on the ice as much as possible, it was frequently necessary for me to go on the shore to escape open water or impenetrable

THE SLED TENT COVER

DESIGNED BY LIEUTENANT WAUGH, UNDER WHICH, DURING A STORM, HE COULD LIVE COMFORTABLY WITH ALL HIS DOGS FOR A NUMBER OF DAYS. NOTICE THE CHIMNEY OF THE COOK-STOVE AT THE LEFT



THE FUR PARKA

WHICH, THOUGH THE TEMPERATURE WENT TO 50° BELOW ZERO, LIEUTENANT WAUGH DID NOT PUT ON ONCE DURING THE JOURNEY, BECAUSE OF THE DANGER OF OVERHEATING

masses of piled-up ice. On shore I had often to make long detours, sometimes of several miles, to get across some of the gullies. At Devil's Gulch, where it has been customary to take to the ice, the way was so steep that I had to rough-lock my sled, by winding the dog chains around the runners as a brake. After I had reached the shore, I found that a landslide had blocked my way, so I had to turn around and climb the hill again, and go down Poker Creek, where it was once more necessary to rough-lock my sled. This day I passed through a herd of 500 reindeer—the largest herd in Alaska — which belongs to Sinrock Mary, the Esquimo Queen.

At Unalaklette, the largest native village in Alaska, I purchased the best native dog that I could get, for fresh meat in case I should get lost and not be able to bring down any game. I made a little harness and put him alongside Bliss in the swing,

THE DRILL PARKA

WHICH HE USED MAINLY TO THROW OVER HIS SHOULDERS WHEN THE WIND WAS STRONG. THE MOST IMPORTANT ITEM IN THE ARCTIC TRAVELER'S WARDROBE IS A GOOD SUPPLY OF GLOVES AND SOCKS

but he could not keep the pace, and after the second day his feet got so bad that he had all he could do to follow; yet every time the team stopped he would run up to the vacant place, and when I started he would try to keep there as if he were working. When I broke camp in the morning, he would lie there and cry; but after we started he would drag himself the

forty to seventy miles of the day's run to our next camp. At times I would put him on the sled, but he resented that, and it was only when he was entirely exhausted that he would stay there.

When I reached Fairbanks I left him with the soldiers at the wireless, although he whined pitifully when he heard me starting the team without him. While at Unalaklette I went into a small trading station and asked for a tooth brush, but was informed that they did not keep them. A man who was in the store said, "Lieutenant, I have one in my cabin that was left there a couple of years ago; you can have it just as well as not, as we have no use for it. I'll wash it for you." There was nothing to do but accept. In just such instances as this is shown the spirit of the country, which is to lend a helping hand whenever it is possible to do so.

ORDINARY TRAMPING CLOTHES

THE LIGHTER THE BETTER — CONSISTING HERE OF A WOOLEN SHIRT, A PAIR OF WEST POINT CADET RIDING BREECHES, WATER MUCKLUCKS (OR WATER-PROOF BOOTS), AND A WOOLEN CAP

My dogs were great hunters, and when they scented game, although they seldom changed their direction, they would always increase their speed. Whenever we came across fresh moose or caribou tracks, that meant easy going, for the scent would put new life into the dogs, and they would pull the load, giving me a rest. On moonlight nights when the rabbits were running around, I always made my best runs, for

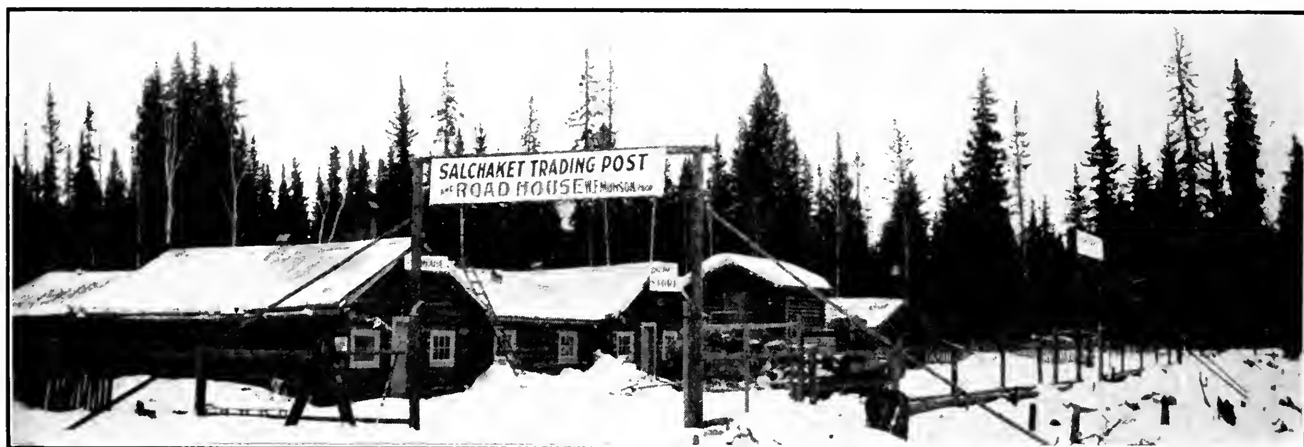
TO KEEP HIS NOSE FROM FREEZING

STRIPS OF FUR AND BITS OF SKIN HAVING PROVED INEFFECTIVE, HE SAVED HIS NOSE AND CHIN BY MEANS OF A SILK HANDKERCHIEF TIED BELOW HIS EYES

the team were keyed to a high pitch. I often wished that I could have had a tame rabbit run ahead of us all the way.

When I was crossing the Kaltag River, an accident happened that luckily for me did not prove very serious. The river was open above and below where I wanted to cross, but I thought that the ice in between the open places would hold. The dogs broke through, however, the sled went in, and I got one leg wet. But I had kept hold of the handle bars and finally succeeded in pulling the sled out and the dogs as well. As soon as I had got them straightened out they dashed across the river within a few feet of the place where they had broken through and, on striking the shore, they stopped and rolled in the dry snow in order balls from my dogs' feet to prevent their going lame, when I did not dare to use my hands for fear of freezing.

At Kaltag I struck the Yukon. This was the first time I had ever traveled on this river, and I encountered a variety of new and unknown conditions. At some places the ice was so smooth that the dogs could not keep their feet, and at others it was piled up in every conceivable shape. There were no trails and the greater part of the traveling had to be done in the dark, for at this season the sun is up only for about three hours. I always tried to get under way as early as possible, often at two in the morning, and at times I ran as late as 11:30 at night. My main idea was to cover as much distance as possible each



AN OUTPOST OF CIVILIZATION

SALCHAKET TRADING POST ON THE TANANA, WHERE LIEUTENANT WAUGH LEFT THE RIVER AND BEGAN THE HOME STRETCH TO VALDEZ

to get the water out of their hair, and then they kept running and jumping about. My sled cover had saved my load from getting wet, and as soon as I was safe on shore, I held my leg up to let the water run out of my boot, and then in a short time I had a fire. It was about fifteen degrees below zero, and my muckluck (or hair seal boot) was frozen to my outside sock and my German sock, but my foot was all right. Had I gone in entirely, there would not have been any hope for me. Often on the trail my hands would get so cold that I could not light a match, but until I attempted to do so I would think that they were all right. At such times I would put my hands under my arms against my body and so warm them. I often chewed the snow-

day, so that I should keep ahead of any storm or blizzard that might be approaching; for heavy snow meant that I had to do practically all the work — to go ahead and break the trail, and then come back and help the dogs. In spots the ice was covered with sand which had been blown in from the sand bars, and this made the sled draw very heavily, besides wearing down the dogs' feet. It was in such places that I had to use the greatest care to prevent their feet from becoming sore. Sometimes I had every dog mucklucked, at the expense of a great deal of trouble and work. When there was any open water about, I had to be doubly cautious, for if they got wet it meant frozen feet. In places where it was necessary to cross an overflow, I would pick the dogs up in my arms, and

carry them across one by one. By this time they acted almost human, and it really seemed as though we knew what was in each others' minds. When the going was good, I would sometimes jump on the runners to ride awhile, and Odella, one of the wheelers, would always look around in a reproachful way, as if to remark that they had enough work to do without my added weight. Needless to say I always got off with a feeling of wrongdoing.

The second day on the Yukon was my longest day's run; I made eighty miles in about eighteen hours. I paid for this achievement by the falling in of my right instep. On the following morning I could scarcely put my foot to the ground, but luckily I had some adhesive tape with which I made a strong bandage and gave myself immediate relief. A few days before the trip was over I had to apply the same treatment to my other foot.

In the Yukon country there is very little wind and the cold is much dryer than in the coast regions. This is the deceptive kind of cold, of the intensity of which the traveler has very little realization. In such weather as this, one's face will freeze before one is aware of it; I carried a small mirror, fastened to my cuff, so that I could watch my face and rub out the frost with my fur mitt, as soon as the first signs of it appeared.

My nose gave me a great deal of trouble. First I had a small piece of fur which I wet and stuck on it, but this was always falling off and finally I lost it altogether. I then tried a bit of rabbit skin, but that, too, was unsatisfactory. If I attempted to warm my nose with my hands, they too would start to freeze; and at times all three members would pain dreadfully, especially after my finger tips had cracked open. At last I happened to remember that I had heard of using a silk handkerchief tied over the nose — an expedient which, in my case, gave immediate relief. My chin also was good sport for the cold, and to prevent its freezing, I tied my fur cap around my face just under my lower lip. It looked like a great loose beard, but it gave me the protection needed. The great danger on the trail is in getting too warm and starting up a perspiration. I would be putting on and taking off gloves, drill parka, and mitts many times a day, in my efforts to keep a normal temperature of uncomfortable coolness. My nose, chin, and cheeks were scabbed over from being frozen, and in some way I had cracked the edge of my left ear; why I did not lose it is a mystery, for by rights it should have sloughed off. It took more than two months to heal.

THE SPELL OF FROZEN WASTES

Some nights when I turned in I was very cold, and as I had heard the natives speak of shivering oneself warm, I tried the experiment, and found that it worked, though it is only another case of the triumph of mind over matter. Had I not been able to keep my mind off what I was doing, I could never have accomplished the trip. I would deliberately think of many nice things, plan what I would do when I got back to the States, and in other ways humor my fancy. It is almost impossible to describe how torturing to the nerves is that great, white expanse of frozen solitude, when, for days, one goes on and on without hearing a human voice unless it is one's own voice in talking to the dogs. Some days when everything would go wrong, I would get hysterical and even cry, and say to my dogs, "Can't you pull harder, boys? don't you see that I am doing all I can." No matter how optimistic one may ordinarily be, one is beset, when traveling alone, by thoughts, that would not flourish in human companionship. Almost invariably, however, I found relief by telling myself that things could be worse. "What if I should strike a blizzard lasting several days?" I would say, "or run into snow so heavy that it would take me weeks to get out. If I go as far as I can to-day I may miss a blizzard." This would put new life into me, and I would soon forget part of my troubles. At other times, when I was pushing on the handle bars, everything would go black before me, though I knew perfectly well what I was doing, and I would call to my dogs to stop, until it passed. I could never account for this.

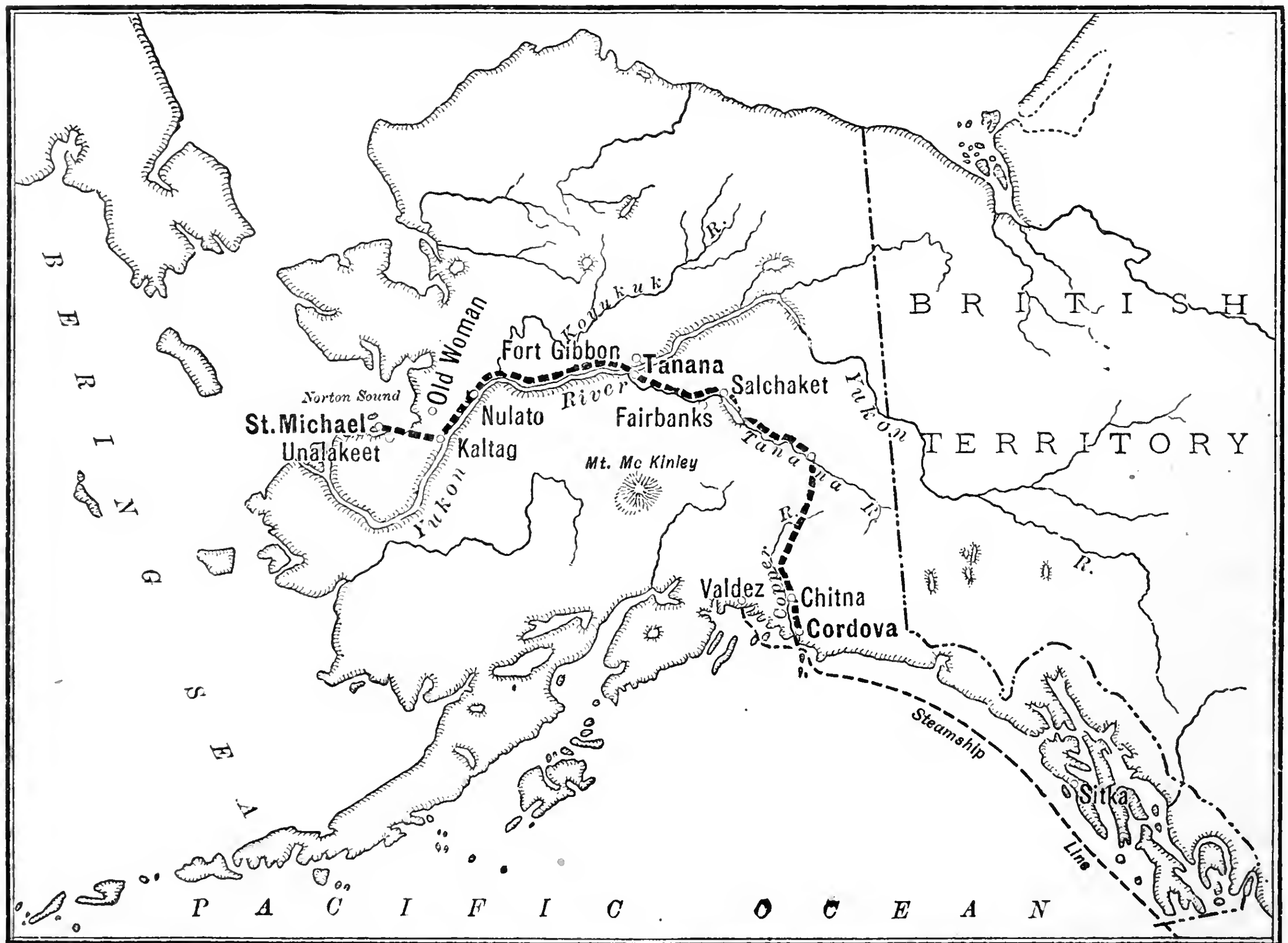
I met very few people while making the trip — not more than six during the first

500 miles. At one cabin, the owner showed me a gun that was of German make and had "T. R." on a gold plate on the side. He said that it was given to Theodore Roosevelt by the Emperor of Germany when the Colonel was going to Africa. Heaven knows how he came by it.

A Jap who ran a road house explained to me the diplomatic astuteness of his Government in sending troops to Korea. Perhaps he would not have said so much had he known that I was an army man. Then there was an Indian who had managed to explode a brass shell while holding it in his hand. I drew the wound together and dressed the hand, leaving him a solution of bichloride to cleanse it with, as well as some carbolic vaseline salve.

The lure of gold and its influence in causing a white man to forget everything is shown at Ruby City, where the last Alaskan gold strike is supposed to have been made. Here they have built the city about twenty feet below the high water mark, and if the Yukon rises this spring as it did last year the city will go out with the high water. It is a shanty city and looks like a puzzle picture.

The days are all very much alike on trips of this kind, though there always seems to be something unforeseen happening to cause worry. I shall never forget the day on which I reached Fort Gibbon. I started about 6 A.M. and the first thing I did was to run into an overflow so bad that I had to stay on the shore. The inland way was all made up of cobblestones and the going was so rough that, in many places, the dogs were out of sight between the nigger-heads. I was able to progress only about seven miles in four hours. When at last I reached the Yukon again and found the going good I began to congratulate myself on the prospect of an easier time;



LIEUTENANT WAUGH'S ROUTE ACROSS ALASKA

THE 1,000-MILE TRAIL WHICH HE MADE FOR HIMSELF, GOING AT THE RATE OF 50 MILES A DAY. THE DISTANCE OF 291 MILES BETWEEN NULATO AND TANANA, RATED AS AN 11-DAY TRIP IN GOOD WEATHER BY MAIL RUNNERS, HE COVERED IN FOUR DAYS IN THE DEAD OF WINTER

for I had been lifting and pushing all day and was very tired. Then suddenly the dogs sighted game and, though I had supposed them nearly dead, they were off like the wind. I called to them, but they paid no attention to me. It was then about 3 P.M. and nearly dark. I was thinly clad, but luckily I had put on my drill parka. I had plenty of matches, but did not relish the idea of trying to keep a fire going all night for about eighteen hours, with no axe and the temperature at 20 degrees below. Besides I was afraid that the dogs might slip into an overflow and get their feet frozen — in which event I should be without a team. There was only one thing for me to do, and that was to try and find them. So I set out to follow their trail, shouting alternately threats of dire punishment and epithets of endearment. After I had gone about five miles I came to open water, and on its edge I found the team. The sled had collided with a cake of ice in an overflow when they were trying to get off the river, but they had all climbed on top of the load out of the water, and they seemed very glad to see me. I forgot all about punishment in my joy at finding them, for they meant food, shelter, and company.

On the journey from St. Michaels to Fort Gibbon, my clothing was pretty light. I wore water boots (water muclucks) as a protection against overflows, and under them I used ordinary socks, woolen rope socks, and German socks; I had on a short sleeved, light woolen undershirt, with a blue flannel shirt. At Fort Gibbon I put on a heavier woolen undershirt. Wool clothing carries the dampness from the body to the outside. I know that my back often looked as though I had been out in a snowstorm on account of the sweat and steam from my body that congealed on the outside of my shirt. I also changed the water boots for high hair seal winter boots that came well above my knees. During the entire trip I didn't have on a fur parka, and I seldom put on my drill parka, although I would tie it around my neck to break the wind. I wore light weight woolen drawers, Government issue, with West Point cadet riding breeches, which are wind proof. I used up four pairs of woolen gloves pushing on the handle bars, and the palms of my hands became very sore from the constant pressure. The stride I adopted was a sort of falling step which threw my weight against the bars. This would keep the sled moving and I was able, after a little practice, to keep it up almost indefinitely. It was not always, however, a comfortable method of procedure, for, when the dogs scented game and suddenly increased their gait, they would pull the sled away and I would fall on my hands and knees. A month after my trip was over, the palms of my hands showed plainly where the skin had been worn away.

This trip was, I believe, a record trip. I had a load of about 200 pounds and only five small dogs. Without changing dogs I covered more than 1,000 miles in 21 days, averaging about 50 miles a day, and the first 500 miles I had to make my own trail and pick my way on the Yukon. The mail schedule from Nulato to Tanana, which the Northern Navigation Company gives as 291 miles, is eleven days; this I made in four days, at a time when the mail runners claimed that the trails were very bad. Perhaps the most uncomfortable thing I had to contend with was hunger. The work I was doing required fuel, and it seemed that I could not get enough to eat. My appetite was enormous. I ate great quantities of anything that I could get, and yet I lost 25 pounds in the 21 days.

A MAN'S LOVE FOR HIS DOGS

The affection one forms for one's dogs in this country is almost limitless. The day before I reached Chitna I met a trapper carrying five little puppies on his back. He had the mother dog with him in good condition. He had been three days (two of them without any food) making twelve miles rather than sacrifice these dogs, and he had frozen his feet and hands so badly, as a result, that I am afraid he was bound to lose some of his fingers and toes.

I like to think that I finished my 1,000-mile trip in 21 days with the same five dogs with which I started, and that not one of them had even a sore foot during the

entire journey. In fact, before I started, Psyriak had cut his left hind foot, which made it necessary to muckluck it, but when I finished my journey he was in better condition than at first. Not once during the whole way did I sit on the sled; I pushed it for at least 500 miles, and ran beside it for another 300. Running became such a habit, that when I got to Cordova and started to go down the street, I found myself unconsciously running. I really had to learn to walk from the beginning all over again.

I hated to part with my dogs, but as our country is too hot for them, I decided to give them away. I broke up the team and separated them, so that they would not work together again. I had several chances to sell them, but I could not think of doing so. When I boarded the boat at Valdez, where I left two of my dogs, my leader, Psyriak, tried to get up the gang-plank after me, but when they would not let him, he stood there until the boat pulled out, whining, as much as to say, "How can you desert me now?"

WOMEN

III

BUILDING A BETTER RACE

WHAT WOMEN ARE DOING TO MAKE MOTHERHOOD MORE EFFICIENT — THE IOWA BABY SHOW, A PRACTICAL STEP IN EUGENICS, AT WHICH BABIES ARE JUDGED LIKE PRIZE CATTLE FOR THEIR PHYSICAL EXCELLENCE — THE WAR ON "THE BLACK PLAGUE" — ERECTING COUNTY MATERNITY HOSPITALS AND CLEANING OUT SLUMS IN A COUNTRY-WIDE CAMPAIGN FOR HEALTHY CHILDREN

BY

MABEL POTTER DAGGETT

THE American woman is the leader of the awakened social conscience in a country-wide crusade that is coöperating to build a better race. Her most interesting activity at present is the Iowa baby. The state that raises corn best is going in now for raising its babies right. He is one of the prize products shown at the State Fair that is held annually in the autumn at Des Moines. The plan is known as the "Iowa Idea." Back of it is the Mothers' Congress, the Federation of Women's Clubs, and the women physicians of the Public Health Committee of the American Medical Association. These women have united in a determination to find out how the perfect child may be produced and cultivated. And they are going at their problem just as other breeders do, by scientific observation of the best specimens obtainable. The Baby Health Contest, which has been established as a department under the direction of the State Board of Agriculture, is not in any sense the usual baby show with public applause just for the prettiest dimples and the pinkest cheeks. It is a serious, practical demonstration in eugenics. It came about in 1911 when the Iowa State College wanted some one to take charge of a "woman's hour" to be held in their building at the State Fair. The women said they would take a week instead and would manage an exhibit of the state product in which they were most interested, entries to be as critically listed and judged and to be as stimulated to excellence as those others where sleek animals stand in a row with the ribbons floating from their headstalls. The unique proposition was

accepted and the college authorities and the Fair directors proceeded to make way for the Iowa baby.

The new department has been placed under the supervision of Mrs. Mary Terrill Watts, of Audubon, Iowa, the woman who originated the idea. There are classes for country, town, and city children, open to babies from one to three years of age. Three hundred dollars in prizes are distributed, with $50 as the sweepstakes prize for the best baby of all. It was won in 1911 among forty-five babies by Master Charles Elmer O'Toole, of Des Moines, aged thirty-six months, who scored 96½ points. But he has lost the championship to the baby who won first prize this year, Dorothy Klusmeyer, of Des Moines, two and one half years old, who led the 175 babies entered and reached a rating of 97⅛ per cent.

The examination is made by a board of women physicians by whom the babies are stripped, weighed, measured, and judged like thoroughbreds. The officials' score card, on which the findings are entered, has been prepared by Dr. Margaret V. Clark, of Waterloo, Ia. It calls for information as to parentage, environment, and feeding, and it suggests imperatively that "a sick, tired, and fretful mother cannot do justice to her child." Then there are listed twenty points relating to physical and mental excellence alone, not regarding beauty, to make the total perfect score of 100. Height, weight, chest circumference, quality of skin and muscle, bone structure, size of head, formation of features, disposition, energy, facial expression, and attention are among the characteristics carefully noted. They are compared with those of the perfect baby defined on the other side of the score card. To his specifications the attention of the mothers is directed. If their exhibits fail to "measure up," perhaps the shortcoming may be corrected. For this purpose they are shown by actual measurement and demonstration just where their children are defective, and are invited to listen to the lectures given throughout fair week by women physicians on hygiene, dietetic care, and psychological training. These same educators are themselves making a careful study of the health contest score cards, which are preserved in the files of the American Medical Association. From them it is planned to compile information of permanent scientific value, to be reduced to rule and regulation for raising babies everywhere. It is hoped in time to be able to give all parents definite knowledge of how to bear and rear healthy children. And when the present haphazard methods in this respect have been superseded, it is expected that social ostracism will be meted out to fathers and mothers who bring into the world any other kind.

These health contests are soon to be extended. Missouri was the second state to adopt the plan at the State Fair in St. Louis in September, 1912. But this intensive study of the baby is only one phase of a campaign to improve the race, that national organizations representing more than a million women have under way throughout the United States. The General Federation of Women's Clubs, through its Health Department, is raising half a million dollars a year to be devoted to the eradication of tuberculosis, and in seven states has aroused the voters to enact laws like that secured in Kentucky last year for the abolition of the common drinking cup, a most pernicious carrier of the disease. The Mothers' Congress has secured the appointment by the mayor of Philadelphia of a child welfare commission to consider ways and means to conserve child life; and the mayors of every city have received an urgent appeal to appoint similar commissions. Pennsylvania is to hold a state conference on the subject at Harrisburg on January 13, 1913. The mothers are also asking that every February 17th be set aside throughout the United States as Child Welfare Day; and the governors of three states — Illinois, New Mexico, and Vermont — have already complied.

TO ERADICATE "THE BLACK PLAGUE"

This work, that was begun to make the people well, is assuming ramifications that are leading deep into economic problems. But the promoters are not

turning back. Setting out to check the great white plague, they have come upon the greater black plague. The women are appalled to discover that this is the cause of much of the blindness, paralysis, idiocy, insanity, and other troubles that they have for all the generations been led to believe were a "visitation of Providence." Directed largely by the women physicians, the leading women's organizations are now uniting in an effort to break what has been termed "the conspiracy of silence" that has been maintained through the centuries in regard to the social diseases. The Health Department of the General Federation, under the direction of Mrs. S. S. Crockett, of Nashville, Tenn., at the biennial convention in San Francisco in July, reported "social hygiene" work under way in twenty-five states. As rapidly as public opinion can be educated, the demand is being formulated for a law that shall require, with the marriage certificate, a health certificate as a clean bill of health for those about to marry. In Connecticut, Washington, Utah, Michigan, and Colorado, laws to this effect have been obtained. Women in Texas and Kansas are moving to secure this legislation. In New York the Legislative League, under the presidency of Mrs. Helen Bent, has been tireless in presenting the bill to this effect which the legislature at its last session for the second time refused to pass.

These and other measures are being actively undertaken to prevent the transmission of disease to that wonderful new baby that is contemplated by the Iowa plan. But it has been decided that the best way to make sure that the sins of the fathers are not visited upon the children is to see that the fathers do not commit the sins. All the hygiene and all the dietetics in the world will not, alone, build the better race that has been visioned. When the scientists shall have contributed of all their knowledge, the task will really await at the foundation, which is the perfect parent.

He is now being prepared. The generation that is growing up, the mothers of to-day have agreed, shall be given the knowledge of the laws of life before in ignorance they break them. There is a difference of opinion as to whether this teaching shall be given in the home or in the school. The Chicago Woman's Club, the Kansas City Woman's Club, the Woman's Department Club of Indianapolis, and many others are making a special study of the subject of sexology, that they may know how to present it to their children. This study throughout the United States is being directed by the women physicians of the American Medical Association, whom Dr. Rosalie Slaughter Morton, of New York, has organized in forty-five state centres. In this missionary movement of which they are a part, they have during the last two years given free of charge, largely to the women's organizations, more than five thousand lectures. But there are many places where the information is presented directly to the young people. Sex hygiene is taught in 138 schools and colleges throughout the country. The state of Washington has made this teaching mandatory for colleges and normal schools and is now preparing to introduce it into the public schools. It is already taught in Colorado, Georgia, California, and Texas. In New York, Chicago, and Newark, the subject is presented in the high schools.

LAWS TO PROTECT MOTHERHOOD

The motherhood of the future is also being planned for. The National Consumers' League is covering this field. That Iowa score card says that a sick or tired mother cannot do justice to her child. So state laws are being enacted to prevent the overwork in industry that wears women out even before they reach motherhood. To establish the validity of this physiological fact, the league for which Mr. Louis Brandeis, of Boston, volunteered his services, argued the question in 1908 before the United States Supreme Court. The case was that of one Mr. Curt Miller, of Oregon, a laundryman charged with employing a Mrs. S. Gotcher more than the ten hours a day which a law in Oregon set as the limit of a day's work for women. Convicted of the charge, Mr. Miller appealed his case to the highest court on the ground that the

Oregon law was unconstitutional because it interfered with an individual's freedom of contract as guaranteed by the Fourteenth Amendment to the Constitution of the United States. In other words, Mrs. S. Gotcher, being an adult human being with the power of choice, he said, had a natural right to hire out for as many hours as she liked without the law's interference.

Had she? Not if "the public health, safety, and welfare are thereby menaced." To prove that they are, Miss Josephine Goldmark, a secretary of the Consumers' League, with ten assistant readers, for eight months ransacked the libraries for the medical literature of this country and Europe. The information thus secured, and presented by Mr. Brandeis, said, in effect, that the most eminent scientists have discovered that fatigue produces a definite toxin or poison in the blood; that pelvic disease and sterility in women often result from overwork; and that exhausted mothers at the best produce but feeble offspring; that the infant death rate is most abnormally high in towns like Fall River and Lowell, Mass., and Biddeford, Me., where the largest proportion of women work long hours in factories.

Considering this evidence, the United States Supreme Court announced its decision that the states have the constitutional right to protect the health and welfare of working women by limiting their hours of labor.

Mrs. Gotcher, therefore, might not work in Mr. Curt Miller's laundry in Portland, Ore., for more than ten hours a day. She had been working fourteen. Was she downcast at this abridgment of her "right to contract" as guaranteed by the Constitution of the United States? She was not. As a matter of fact Mrs. Gotcher had never had so much "right to contract" that she had ever been able to get it into action. Her power of choice was limited to accepting just about any terms that her employer might offer, both in respect to wages and hours of work, because she belonged to no labor union that could make better terms for her.

With Mrs. Gotcher are some six million women in industry who welcome the shorter working day. The Consumers' League now has a national committee devoted to hastening its dawning in every state. Since the decision in the Oregon case, twenty-five states have passed this legislation in behalf of the woman who works, Missouri and Utah even making the new working day nine instead of ten hours, and California and Washington scaling it down to eight hours.

RURAL MATERNITY HOSPITALS

Motherhood is at last a matter of public concern. If it is, can the United States afford to let nearly 13,000 women die annually from diseases incident to child birth when a very large percentage of those deaths are preventable and remediable through proper care? Dr. E. E. Munger, of Spencer, Ia., proposes the "county hospital plan" as a means of reducing the number of deaths from this cause. The State Federation of Women's Clubs and the Mothers' Congress in Iowa in 1909 secured a state law providing for these hospitals in each county, and New York state in 1912 enacted similar legislation. The law empowers the counties by local taxation to raise the money for erecting their own hospitals. In Iowa, Jefferson and Washington counties already have built and equipped such hospitals, and dedicated them last spring. They provide not only for maternity cases but for all the illness to which the community is subject. The aim is to bring within the reach of the average home in rural districts and villages the best treatment that medical science affords in large cities. The charge is based on the cost of service without the added profit on the investment that a private institution exacts. The promoters plan that the public hospital system shall become as recognized and established a utility as the public school system.

The feeling is growing that these mothers, whom the State is making ready to take such excellent care of, should be trained for the distinctive work that is to be theirs. Once the art of home making was passed on down through the generations from mother to daughter. But since so many girls now go directly from

the school room into industry, they no longer have the opportunity to learn home making at home. So the school must teach it. The elementary lessons in sewing and cooking that were introduced into the schools in the nineteenth century have gradually expanded to courses in domestic science. Now mothercraft and housewifery are being definitely taught. In Seattle, an advisory committee of seven women, coöperating with the superintendent, has secured a suite of rooms in which the girls of the public schools are instructed in the duties of home making and in the care of the sick. In Chicago, during the last year "little mothers classes" have been established in thirty-one of the public schools. A thousand girls between the ages of twelve and fifteen are being instructed in the care of babies. Everything from the hygiene of the nursery to the making of baby clothes and the learning of lullabies is included in the course. Philadelphia has established a similar addition to its public school curriculum, with a real live baby provided for the model in each class when the girls are taught to bathe it and dress it and feed it. Los Angeles is erecting a $50,000 school building to be devoted to domestic science.

CLEANING UP INDIANA'S SLUMS

Domestic science is teaching the girls of the public schools cleanliness and the best way to wash and scrub and how to take care of the plumbing and what labor saving appliances to use to lessen the drudgery of housework. But there are public school pupils receiving this instruction who must go home to apply it in houses that haven't so much in the way of a household convenience as a water faucet or a kitchen drain!

In the hospitals that are building through the country, tuberculosis patients, cured by a long and costly course of treatment at public expense, are discharged with warnings always to sleep with the windows open and to take plenty of baths. Many of them go home to houses that haven't any bedroom windows to open nor the water in which to take so much as a sponge bath. And when the work the hospital did is undone, they join the 250,000 who are dying annually in the United States from tuberculosis.

A woman has awakened a state to this economic waste. She is Mrs. Albion Fellows Bacon, of Evansville, who has written Indiana's first law for housing reform. Now she has enlisted the aid of the State Federation of Women's Clubs. With the slogan, "The Homes of Indiana," they are going to demand from the next legislature more legislative aid in that housing reform which combats disease by cutting windows in dark rooms and by compelling landlords to provide the decencies of living even for the poor who can't pay high prices for such privileges.

She is small and sweet, that sort of a woman you may think of as sitting at home and rocking her babies to sleep. And this she did. But in the intervals and after she had them to sleep, the twins and two more, she did this other service for her state.

In her home town of Evansville, where her husband is a merchant, Mrs. Bacon began her interest in other people's houses as a Friendly Visitor and as the organizer of the Flower Mission. And she made little visits to carry glad blossoms to the homes of the poor and to tell them they ought to wash their children's faces. But she hadn't made many visits before she discovered that it wasn't roses and mignonette that were needed so much as sewers and sinks and a few other incidentals that are fundamental before one may begin to garnish life with decorations. She had heard philanthropy dwell much on the persistent filthiness of the poor. But one day she came back from the "Cotton Mill Block," where they had typhoid and tuberculosis always with them, to exclaim passionately, "How can they wash without water or dry without drains?" To a prominent charity worker she went with the question, "Why is it the landlords don't put in hydrants down there?" And the charity worker answered wearily, "Because they don't have to. There is no law to require it, and the hovels in their present ramshackle condition bring a good rent anyhow."

"I knew then," Mrs. Bacon says, "that there would have to be a law. But I didn't dream that I would have to get it. I just thought somebody ought to do it. But after awhile it got so that a procession of white faced, wailing babies from the tenements began to appear in the dead of night waving their little arms and crying, 'Sleep no more 'till we are cared for.' When you get to 'seein' things at night' you are ready for work."

So she sent out a list of questions that brought in information about housing conditions from every charity organization secretary in the state. In many cities and villages she conducted a personal investigation, searching out the "sorry places," going up and down rickety stairways, through sodden, slimy yards, picking her way over ash heaps and refuse and past loathsome outbuildings, and looking at tenement tragedy face to face. Then she told Indiana what she had found out. And everybody was so surprised to learn that their state had slums. They thought only New York and Chicago had them and that these districts in "our town" were just old houses where poor folks lived. No, Mrs. Bacon said, these were slums with all the slime on. They were the reason, she pointed out, why so many babies die in their second summer. And it was much worse about the babies who didn't die but who grew up there to be probable consumptives and possible criminals. Moreover, she emphasized, the child from the slums sits side by side with your child and my child in the public schools.

She was persistent. She lectured about these things and wrote about them for the newspapers, and she addressed bar associations and chambers of commerce and many civic bodies and even preached in the pulpits of the churches, calling on the church members if they were really following Christ to come out into the alleys and over the flats and down by the railroad tracks. Having aroused public sentiment, she went up to the legislature with her law in her hand bag. She was allowed the unusual privilege of opening the senate with prayer. Then she faced the law makers of Indiana to tell them what she wanted.

"No one but the Lord," she says, "will ever know the horrible feeling of fear and loneliness that came over me. For I am not a fighter. I am not brave. I hated to be away from my husband and my children. But for other homes and other children I knew I had to."

She told the listening senate the annals of the poor just as she had seen them. She had photographs of typical insanitary districts mounted as posters which were strung on a wire across the state house like a wash on a line. She showed the statesmen Taylorville, a suburb of Terre Haute, with 615 people living on the "dumps." She showed them other towns with people living along alleys where the windows opened close to garbage barrels and cesspools, people living a score in two rooms, people in tenements of twenty families with their sole water supply a public fountain two squares away. She showed then Indianapolis's foreign district, in which more than one half the yards have no sewerage and more than 50 per cent. of the dwellings no water, and in which the mothers, to put off washing as long as possible, "sew up" the children to eat, sleep, play, and go to school in the same clothes all winter. She showed them the home of an American workingman where a mother brought all her water in a pail from a hydrant two squares down the street and up two flights of stairs to a wooden washtub in the kitchen to give six children their regular Saturday night bath. And she showed them tenements where the tenants, refusing to carry down the water that they had carried up, pour out of the windows and over the banisters all suds, dishwater, and slops to soak into the yards beneath. This lack of conveniences leads to disease. The use of such conveniences as exist by many families in common, crowded together without privacy, leads to immorality. Girls in these homes, unprotected alike from dirt and vice, go upon the street. Men go out to the saloons.

"Gentlemen," Mrs. Bacon urged, "the slums can't be painted as black as the sin and death that stalk there. The poor don't have a chance to be clean. How can they be good!"

The legislature of Indiana passed her tenement law. It requires that there be one window in a tenement room, that no room be less than seventy square feet in area, that every apartment shall contain 400 cubic feet of air space for every adult and 200 cubic feet for every child less than twelve years old, and that every apartment shall have proper drainage, a sink, and running water. But because the landlords exerted their "influence," this law was amended to apply only to certain cities of Indiana. Mrs. Bacon wants it for every town and village. The women's clubs of the state have organized a housing committee to help her. Both men and women in Indiana have formed also a State Housing Association, and surveys are being made of forty cities for convincing evidence with which Mrs. Bacon will go to the legislature again this year. She is the secretary of the Indiana Housing Association and also a director of the National Housing Association that is organized and at work for this reform in eighteen other states.

So the better race is being builded. Some day all these lines of effort shall converge in the result toward which they are urging — human happiness. And a new people, who shall be born right in homes that have been made right of fathers and mothers who have been educated right, shall be fashioned once more in that image of God from which the generations have so far departed. There are those who claim that women have lacked creative ability in the domains of music and art and literature. Hush! Beethoven and Michael Angelo and Shakespeare and the others did what they could. The American woman is now engaged in the transcendent creative task. And the world awaits her work.

DANGERS OF OUR GROWING DEBT

THE MENACE TO POSTERITY IN OUR RECKLESS ISSUES OF LONG-TERM BONDS FOR CURRENT BETTERMENTS — FARMING OUT THE RIGHT TO TAX TO PRIVATE CORPORATIONS — AN ANALYSIS AND A WARNING

BY

CHARLES WHITING BAKER

(EDITOR OF "ENGINEERING NEWS")

THERE are many streets in New York City on which the traffic is so great that the best asphalt pavements wear out and must be renewed oftener than every ten years. On some of these streets the asphalt has already been relaid three times. And every time the money to do it has been provided by an issue of city bonds which will run fifty years before maturity. More absurd yet, New York has even issued bonds to pay for the fireworks burned to celebrate the opening of a new bridge, and other bonds to pay for the music furnished on its amusement piers.

These are merely the grotesque freaks of a practice that has taken a deep hold upon American habits of thought and that lies at the roots of much of the high cost of living. We are becoming a nation of careless borrowers who lightly pass on to posterity the burdens of our legitimate expenditures and even of our extravagances.

The trouble with our public finance is that we are rolling up huge burdens of city debts and state debts to pay for pleasant ways of living and to invest in doubtful enterprises. We must pay interest on these debts year by year, and the taxpayers of a later day must pay the principal. Why should we unload upon another generation the burden of paying for our own extravagance and our own gullibility?

New York State borrows a hundred million dollars to build good roads; Pennsylvania will borrow fifty millions. Ohio has amended her constitution to permit a like expenditure. And most of these roads will be worn out and require rebuilding long before the bonds issued to pay for them fall due. Good roads are desirable, but those who build them and receive their benefit should pay for them.

Raising money for public works by the issue of long term bonds was originally justified by saying that, as the works would outlast one generation, it was fair that part of their cost should be passed on to those who are to come after. But nowadays that distinction is well-nigh forgotten. Cities and states raise money on long term bonds for all their works, temporary and permanent alike.

But it is not only states and cities which are fastening burdens of public debt on a generation yet unborn. Corporations rendering public service are doing the same thing on even a larger scale. The residents of a city who pay street-car fares are paying the interest on the bonds issued to build the road, whether owned by the city or by a corporation. And the debt of public service corporations is rolling up like a huge snowball.

Nor is the United States the only sinner with respect to public debt. In some respects Great Britain, from whose example our economic and financial system is patterned, is even worse.

The capitalization per mile of the English railroad system is far higher than any other system in the world. This is due partly to the great cost of right of way and to the substantial character of the construction. But it is due also to the financial policy by which the cost of all improvements upon British railroads is added to the capital and not paid for out of surplus earnings. Thus the capitalization is continually swelling, and, equally, the sum upon which the rates for travel and freight must pay interest.

ENGLAND'S WISE NEIGHBORS

Consider the financial methods of the German and French railroad authorities. They are steadily liquidating their capital obligations with the purpose of ultimately paying off all the debt that was incurred in the construction of the roads. Obviously, when this purpose is achieved, rates may be greatly lowered — to a point just sufficient to pay merely the operating expenses and the cost of current improvements. Already the German railroad system yields annually an enormous revenue above all charges. And it is easy to demonstrate that Germany and France will have a tremendous advantage over Great Britain in the race of international competition a few years hence, when their railroad debt is paid off.

In America we are following England's footsteps. We are paying interest to-day on moneys expended more than half a century ago to surveyors who marked out the line, to lawyers who lobbied charters through legislatures, to promoters who bought votes in aid of local subsidies to the line, to unsuccessful experimenters with machines for digging dirt or blasting rock.

The same evils appear in the trust-made monopolies as appear in such natural monopolies as railroads and gas plants. The strongest influence in bringing about the formation of trusts has been the swelling of capitalization because of the power gained through monopoly to compel the public to pay interest on an excessive volume of capital. This movement is still in progress. In more and more industries, competition is being limited and controlled, and large issues of stocks and bonds are being poured forth upon which interest must be paid by the public.

HOW PUBLIC DEBT RAISES LIVING COSTS

Here, again, the practical result is to give private corporations the power to tax. The effect upon the taxpayer is the same, whether he has to take an extra ten dollars from his year's income to pay his share of interest on Government bonds or state bonds or municipal bonds; whether he pays the ten dollars in extra railroad charges because of excessive railroad capitalization; or, finally, whether he pays the ten dollars in excessive prices for steel or tobacco or hardware or food because

the trust which controls his supply of one or another of these products seeks to make selling prices which will enable it to pay interest and dividends on excessive capitalization.

In the last analysis the ultimate effect of all this public and quasi-public debt is an increase in the cost of living. This means not only an increase in the household expenses of every family and in the rent paid by every tenant, but it means also an increase in the cost of carrying on commerce and manufactures and every other form of industry. In the competition of international trade the handicap of public debt will certainly be felt.

Of course, mere size of debt is no cause for alarm. Cities must have great and expensive public works, for the construction of which money must be borrowed. But, like the manufacturer who must have a new labor-saving machine at any cost, they ought to pay for them from the first profits and not let them grow obsolete before the debt is paid.

For nearly a century the civilized world has been passing through a period of economic and industrial revolution. Changes have been wrought in this period greater than the changes of a thousand years before. It is unlikely that the end of these changes has come. It is conceivable that the centripetal tendency which has concentrated population in cities may be succeeded by centrifugal forces which will scatter it. New inventions, altered methods of commerce and production, the exhaustion of certain natural resources, profound alterations in our system of government — all may bring about an economic revolution as great as that of the nineteenth century.

Under these conditions it is as unwise for us to pass down a vast burden of debt to the generations which are to follow us as it would have been for the cathedral builders of the Middle Ages to have left the cost of those great structures to be a perpetual burden upon the generations who followed them.

The public will not indefinitely endure this burden of interest-paying on dead capital. It is all well enough to say that a workman who uses tools should be willing to pay for their rental. He may be willing to do that, but it does not follow that he is willing to pay rent for the tools that his grandfather wore out. If the public realized that it is to-day being made to pay interest on the money which a street railway baron stole before those now in active life were born, and interest on gas pipes that were long ago dug up and sent to the scrap heap, and that under our present vicious financial system these crimes and blunders of dead men must forever continue a burden on labor and commerce and life itself — if the public realized this, how long would the capitalistic system endure and how quickly would the public rush to socialism with its threat to wipe it out?

THE MARCH OF THE CITIES

A CITY THAT DECLARED A DIVIDEND

THE modern conception of city government, as a business proposition rather than as "politics," is strikingly exemplified by the recent action of the mayor and common council of Fargo, N. D., in declaring a dividend of 6½ per cent. to be distributed among the tax payers on March 1, 1913.

In spite of painstaking care in the preparation of city budgets (a practice which is increasing among municipalities everywhere), it frequently happens that more money is collected from the taxpayers than cities actually require for the economic administration of public affairs. Many other cities have had an unexpended surplus in the city treasury, but in returning this surplus to those who contributed it, Fargo's action is unique.

The idea originated with Mayor William D. Sweet. Mayor Sweet is a harness dealer, and when he took office he saw no reason why the same business principles which he applied in his harness shop should not prevail in the management of the city's affairs. Fargo, although the capital of North Dakota and its largest municipality, is a city of less than 14,000 population, and its municipal needs, even when a considerable amount of public improvement work is done, are not large. In the last year, six miles of streets have been paved, the police department has been increased from twelve men to fourteen—and other public improvements have kept pace with these. Nevertheless, the city found itself, in September, 1912, with a $12,000 surplus in the contingent fund, which is the fund to which the surpluses remaining after the various city departments have been provided for are transferred.

A large part of this sum resulted from the adoption, under Mayor Sweet's administration, of a plan of taxation designed to be more equitable than previous practice had been. Public service corporations were assessed at the actual value of their property for the first time, and were taxed at the same rate as that paid by individual property owners. Heavy license fees were imposed upon traveling peddlers, who had previously occupied the streets of Fargo with their stands without paying the city an adequate compensation. Various circuses and outdoor shows, that had formerly been allowed to operate in Fargo at a small expense, found, in 1912, that they were required to pay to the city fees that were somewhat proportionate to the amounts they took from the citizens.

Mayor Sweet took the ground that the income from such sources and the surpluses remaining above the estimated cost of improvements were profits arising from the business operations of the city, and as such should be distributed as a dividend among the tax payers, who are the real stockholders in the municipal corporation. In his annual message he suggested this project to the common council and, although the plan was at first opposed because of its novelty, the people of Fargo quickly recognized its merit and the council approved it. Accordingly, $2,000 of the $12,000 surplus is to be kept as the nucleus of the contingent fund and the other $10,000, amounting to 6½ per cent. on the entire tax levy of the city, is to be returned to the tax payers or credited to them against their 1913 taxes.

FORWARD TO THE LAND

THE ARISTOCRACY OF FARMING

ONE of the most serious disadvantages about farming is the reputation of being a narrowing, undignified, and unsophisticated occupation — a reputation that has clung to it even in its renaissance as a business and a science. A correspondent from Arkansas, Mr. Harlan Bennett, has made a careful and detailed study of the interesting conditions in the Ozark section of that state, which again emphasizes the fact that farming is becoming a business which needs brains and capital for success. The end of the clodhopper is begun. Mr. Bennett's studies show:

That a man to take up farming must be supplied with capital — within reasonable limits the more the better — and equipped with experience, theoretical knowledge, and an unquenchable enthusiasm and energy.

That success on a farm can be expected only as a gradual result and can rarely if ever be both immediate and permanent.

That on the average the one man-forty acre farm is a more complex business and a more ambitious enterprise than the majority of one man commercial, mercantile, and manufacturing industries.

That successful farming returns more per

dollar invested than any other legitimate occupation — when there are included the saving in the expenses of the home and the living of the family, which are, of course, integral parts of the farm enterprise.

According to Mr. Bennett, there are in the Ozark section of Arkansas alone about thirteen million acres of land adapted to fruit raising of which less than half a million acres are as yet devoted to commercial fruit growing. And he adds, what is more interesting still, that there are in that country hundreds of men who have come to the land and had good fortune upon it. Of some of these whose places he has visited and whose stories he has heard, he says:

"Ten years ago Mr. G. T. Lincoln, of Benton County, Ark., at sixty-three years of age was a traveling salesman for a clothing house. He had a salary of $3,000 a year, but he could see nothing in the future save a life on the road —if he should stay in that business. Six years before, he had purchased 80 acres of land and had set out 18 acres of this in apples, which were now just beginning to bear. Tired of the road, in uncertain health, and anxious to spend more of his time with his family, he went back to the land.

"Last year, he refused $40,000 for the land for which he paid $3,500 in installments. Moreover, during his ten years of farming he has bought several other places, and has spent liberally on his living expenses, for he is a man who believes in comfort. This has all come from his original investment. Since the 18 acres began bearing he has never made less than $40 an acre in any year and for three years in succession he cleared $118 an acre.

"'But you see, Captain Lincoln, you had capital to start on,' I objected. He must have guessed my thoughts, for he replied: 'And so would any young man need it. Not so much as I had, perhaps, for I was an old man when I started in. But farming is like any other business: you must have capital to start on. Our young man would need enough to make the first payment on his land and for a team and implements. If he didn't have much money, the first year would be rather hard on him, but his crops would give him a living and would take care of the future payments.'

"A few miles beyond, I found Mr. G. W. Gipple and a farm that was more than a farm — it was a real industrial community of the most approved style. Besides several hundred acres of rich farm land, I saw an apple evaporating plant, a box factory, a big repair shop, and a vinegar and cider factory run in connection with the evaporator — all these besides an unusual number of modern barns, poultry sheds, and pig stys, a big 10-ton motor truck, which during the harvest season runs 24 hours in the day and does the work of 18 teams, half a dozen tenement houses, and seven gasolene engines that furnish power for the miniature factories. The family has a touring car.

"Five of the children have graduated from the state university. Mr. Gipple refused to place a valuation on his place, for people would laugh at him and he would not sell anyhow at any price. But he did tell me that the buildings on his place had cost him more than $30,000. It is my own opinion, and that of his neighbors as well, based on market values, that the farm could be sold for $125,000. Then, too, the owner is a director in a bank whose stock is selling high above par. And it all came from an investment of $900!

"Back in the panic years of 1893-94 Mr. Gipple, then in the retail lumber business in a little town in Illinois, but not selling enough stock to make a cracker-box, went to Arkansas to visit his father-in-law who had gone down the year before to escape the severe winters of the northern state. It did not take much persuasion on the part of his wife and her relatives to induce him to sell out his lumber business and buy 60 acres of sassafras with an old apple orchard hidden in it, which with buildings cost him $1,400. He gave his note for $500, sharpened his axe and 'waded in on that sassafras.' The old orchard has proved profitable and has been increased by many newly planted acres. During the last six years his bearing trees have netted him $200 an acre and for the two years previous to this he netted $600 an acre from part of his land. Why should

he sell at any price? As he says, 'I have a fine farm, I am making a good living, my family is happy and so am I. In fact, I am really satisfied. And while I have my responsibilities, I do not believe that I could have so much freedom anywhere else as I have on the farm.'

"I could continue these experiences for page after page, for I found such men as these from one end of the Ozark Uplift to the other. The great majority started with small capital, and many of them tackled the proposition barehanded. Of course, those with capital had an advantage, for they were able to start operations on a large scale much sooner. The difference is much like that between a fast freight and a passenger train: it takes the freight longer to get started, but once under way it will go just about as fast as the other. It is largely a question of momentum, and capital is the momentum of business.

"I found also not a few of the passenger train type, men with larger capital who have gained amazing returns from their investments, usually through corporations. Of the latter, the largest is under the management of Mr. Bert Johnson, but owned by three separate companies. While all of the orchard at Horatio was set out at one time, that at Highland was planted in instalments and, of the 2,900 acres now set out, only 1,510 acres were bearing in 1912.

"Manager Johnson is a most interesting man. For eleven years he was in the commission business in Kansas City. Failing health caused him to sell out and go to Arkansas, where in 1904 he started the Highland Orchard by setting out 900 acres in Elberta peaches. In selecting his land he was very careful to see that it had excellent air-drainage — one of the most important requirements in an Ozark orchard, for it protects the trees from early frosts. His care in this respect has paid him well, for though the average orchardist has a crop seven years out of ten, Mr. Johnson has never experienced a failure. The 90-acre tract began bearing in 1907 and in the five years ending with 1911 it brought a total of $517 net an acre — a yearly average of $103.40 an acre on land for which he paid $12.50!

"There are thousands of acres of land in this Ozark country such as these men have prospered upon which can be purchased at from $12 to $40 an acre, most of it at the lower figure. Of this the purchaser need pay only one fourth 'down,' the great majority making their other payments out of the profits from their crops. In other words, this land will cost the settler from $3 to $10 an acre in cash. In the second item, a wagon and team is by far the largest sub-item. The climate is such that he needs fewer and less expensive buildings than farther north. They are less expensive not only because they are constructed with less lumber but also because this lumber can be purchased much more cheaply from the many sawmills in the section. Garden truck is grown ten months out of twelve and nearly every new man puts in a few acres of strawberries, the returns from which afford him in the early spring sufficient cash for the ensuing months. Of course his poultry, etc., do much to lessen table expenses.

"The question arises: If this be such good land, why is it so cheap? Well, for Arkansas it is not cheap. According to the last census, the value of farm land in Arkansas more than doubled between 1900 and 1910, though at present it is only $14.13 an acre. But this is on the basis, not of actual, but of market values, which are no higher, first, because the real development of the state began only within the last few years, and second, because there are to-day less than half as many people in the entire state of Arkansas as are to be found in the city of New York."

This does not mean that Arkansas is necessarily a better place to farm than many others. It means only that here is another state, beside the many more often written about, that has more land than people — that needs developing and that will handsomely pay for the right kind of developing. It is a country poor in many things that a thick population brings and rich in natural resources. But in spite of this a man may fail in Arkansas as he can anywhere else. The markets and the weather may disappoint him. It is an opportunity, not a certainty, and an opportunity for a farmer of the new era.

ANSWERS TO QUESTIONS ABOUT FARM LANDS

56.— *Q.* I wish an apple and peach farm in the East that will prove a good, paying investment. Will you suggest a few possible localities?

A. The hillsides of the Berkshires in Massachusetts and Connecticut: Ontario, Wayne, Orleans, and Niagara counties and the Hudson River Valley in New York; the upland limestone regions of Pennsylvania and New Jersey; the Green Ridge section of Maryland; the foothills of the Appalachians in Virginia and North Carolina; Morgan, Mineral and Hampshire counties in West Virginia; and northern Georgia. But you must remember that the paying ability of a farm will depend as much upon the care and management it receives as upon its location.

57.— *Q.* I am a young married man and my failing eyesight forces me to give up a good position. I have $2,700 and have been advised to take up farming as an occupation. Although I have no farming knowledge or experience, I am told that by buying a farm of some 25 acres in southern New Jersey for $3,000 and paying half cash I could get started and make a nice living. Do you think by extensive reading and by hiring an experienced man for a year or two I could learn enough to make such a place pay?

A. There is danger that your advisor is more optimistic than practical. Assuming that your eyes permitted a course of "extensive reading" you could hardly at the same time practice intensive farming, and no amount of reading by itself ever made a farmer. A hired man that could teach you farming in a year would be worth more than you could afford to pay; and it is doubtful whether a 25-acre Jersey farm would economically warrant more than one man's labor.

In spite of all this you might succeed, but no careful man would accept the responsibility of advising you to buy a farm outright now. A safer plan would be to work on a good farm for whatever you could get for a year or two, and so gain, without much expense, essential practical knowledge and the right point of view. Or if you could devise some other means of earning a small salary, you might rent an acre or two where you could live and gradually learn the chicken, small fruit, or vegetable business. Of course, in either case the more sound agricultural books and magazines you could read in addition, the better.

58.— *Q.* What is the average cost of farm land in Fluvanna County, Va., and is it adapted to apple growing?

A. The 1910 census places the average value of this land at $9.78 per acre, an increase of 75 per cent. over the 1900 figure. The best river bottom lands, however, sell for from $20 to $75 per acre. Apples are grown to some extent in favored upland locations, but the county as a whole is not as well suited to fruit growing as the Piedmont and Blue Ridge sections farther west.

59.— *Q.* What can you tell me about land in the vicinity of Port O'Connor, Tex.?

A. Port O'Connor is located on a soil known as Nueces fine sand, which forms almost the entire southern part of Calhoun County. According to a recent survey this is a grayish sand. A little silt and organic matter give it firmness and a slight loamy texture. The subsoil is of the same type and is commonly underlain by a mottled clay. Though the surface is practically level, drainage is good except in a few marshy areas near the coast.

It is not a strong soil, but as it warms up and matures crops quickly it is utilized to some extent for the production of early melons, cantaloupes, sweet potatoes, and other truck crops. Grapes, corn, and cotton do less well. The best results are obtained where the sandy clay subsoil is but two or three feet below the surface. Rainfall is an important local consideration and windbreaks are valuable for protecting the soil from drifting. The land is usually held at $15 to $25 an acre.

Near Port O'Connor on Matagordas Peninsula and Island the soil is entirely ocean-formed Galveston fine sand. The coarse native grass is grazed and in a few places the soil is cropped with vegetables, but in general it will not support profitable agriculture.

60.— *Q.* What are the agricultural conditions in Baxter County, Arkansas?

A. The land ranges from mountain tops to river bottoms, including ridges, slopes, prairies, etc., of varying agricultural value. The best land is generally a rolling limestone formation on a clay subsoil. With a mild climate and a generous rainfall throughout the county it is claimed that all north temperate crops can be profitably raised; special opportunities open along the lines of fruit and stock raising on the rolling uplands. A considerable acreage still bears good timber. About forty thousand acres of homestead land are still unclaimed, but these are of the less desirable type. We have been referred for further and more detailed information to Mr. J. L. Cowan, of Mountain Home, Ark.

The World's Work

WALTER H. PAGE, EDITOR

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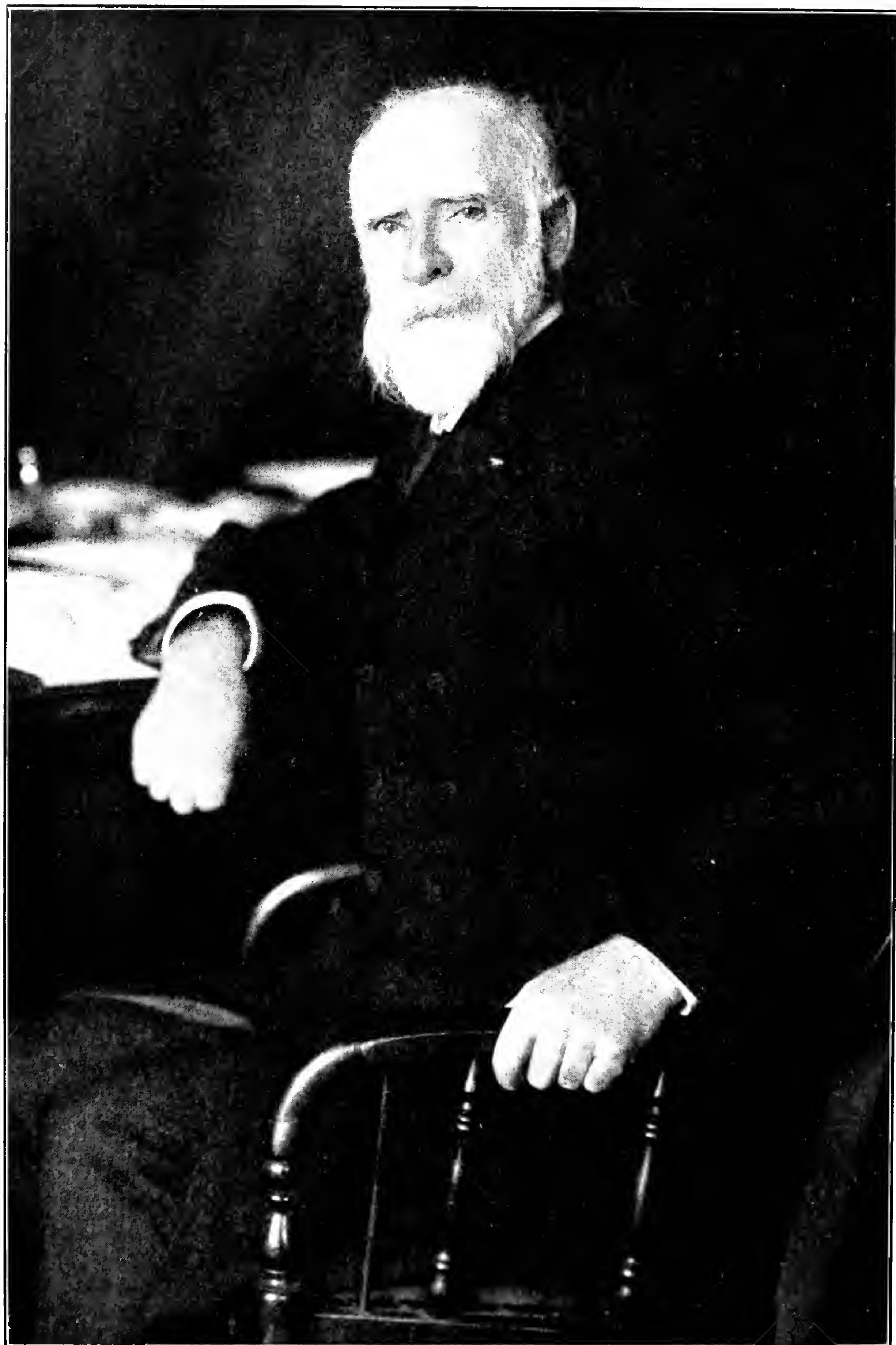

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THE RIGHT HON. JAMES BRYCE

THE RETIRING BRITISH AMBASSADOR, WHO GREATLY ENDEARED HIMSELF TO THE AMERICAN PEOPLE BY HIS ACUTE AND SYMPATHETIC ANALYSIS OF OUR POLITICAL INSTITUTIONS IN HIS "AMERICAN COMMONWEALTH" AND BY HIS RESIDENCE IN THIS COUNTRY

THE

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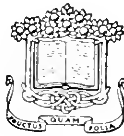

NUMBER 3

THE MARCH OF EVENTS

WE MAY greet the New Year with good hope. The Presidential election was so decisive — Mr. Wilson could throw out every Southern state and still have a plurality in the Electoral College — that all governmental responsibility falls on the Democrats; and they will have a fair trial, under the leadership of a progressive man of conservative mind. And the election left no bitterness and little immediate fear. The tariff will be revised downward, but not so radically as to produce a panic in business. And business, if it be wise, will at once adjust itself to the change. This fundamental but long-delayed change in our policy has come — or is about to come — with little shock and after long preparation of the public mind.

And business conditions are sound. There are grave problems that face the people, such as the ever-rising cost of living, the necessity of a better currency system, the great task of organizing rural life and all its activities; but these take a long time and there are not likely to come any sudden crises in the meantime.

We are peculiarly blessed, in fact, that our life can go on smoothly, without fear of any sudden catastrophe such as periodically comes over Europe by reason of the danger of a great war. Our isolation is yet our great safety.

Still the world constantly becomes smaller and our connection with other countries constantly more intricate. See how the volume of international trade has leaped beyond all preceding records. See how we are involved in Central America. See how we have great commercial interests in Asia. See how even more intimate become our financial interests with Europe. As a people and as a nation we have no promise of continuous summer seas for our sailing; but our gravest problems and dangers are such as admit of time enough to solve them and to ward them off.

Of course, our primary tasks are yet domestic — the building up of our own people, the wise conservation of life and land, and the use of our institutions as flexible instruments of human progress.

Alike in our great public policies and in our individual tasks, there remains good reason for the cheerful spirit of self-confidence and the high hope that our foreign friends often ridicule us for, and receive our smiles for their pains.

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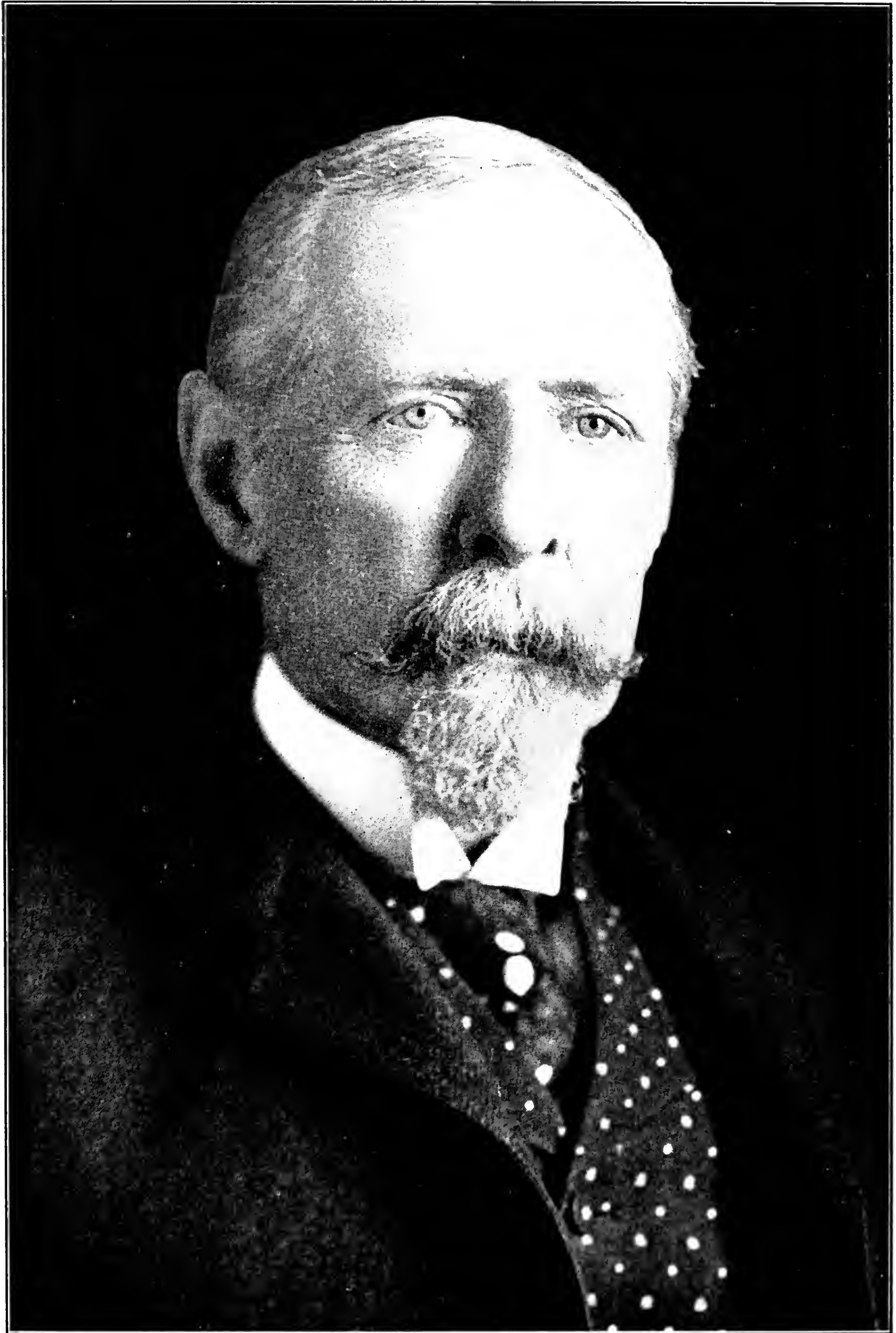

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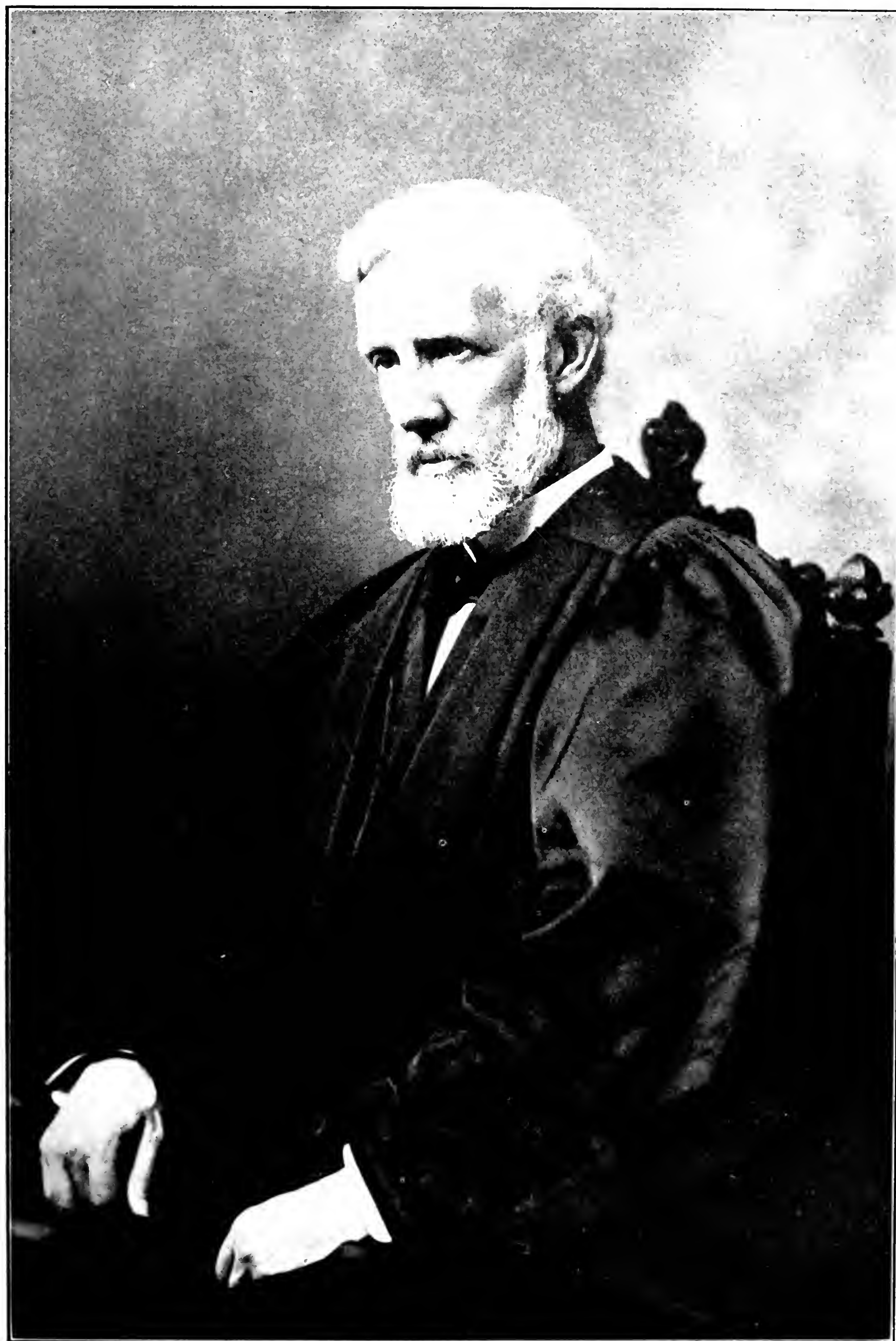
THE HON. A. A. ADEE

THE SECOND ASSISTANT SECRETARY OF STATE OF THE UNITED STATES, WHO RECENTLY CELEBRATED HIS SEVENTIETH BIRTHDAY AFTER THIRTY YEARS OF SERVICE AS THE OFFICER WHO BY HIS VAST KNOWLEDGE HAS MADE THE CONTINUITY OF THE FOREIGN POLICIES OF SEVEN SUCCESSIVE NATIONAL ADMINISTRATIONS



JUSTICE JOHN W. GOFF

OF THE SUPREME COURT OF NEW YORK, WHOSE EXPEDITIOUS AND DIGNIFIED HANDLING OF THE ROSENTHAL MURDER CASES AND OF THE HYDE TRIAL HAS DEMONSTRATED THAT THE CRIMINAL LAWS CAN BE JUSTLY AND QUICKLY ENFORCED WHEN THE PRESIDING JUDGE EXERTS THE POWERS WHICH ARE LODGED IN THE COURTS

A DECENT HINT TO BUSINESS

THE tariff will be reduced by Congress next summer. It is a little difficult to realize this, after so many threats and promises that have been deferred. But the people voted for a reduction two years ago at the Congressional election and again still more emphatically last fall; and the Democratic party and a Democratic President are pledged to this policy. Everybody knows that such a reduction is coming.

Now any such change will have an effect on certain kinds of business; but the effect of the coming changes can be greatly lessened by preparing for them in good time. It will probably be six months before Congress, in special session, can finish this business. Presumably the new law will not go into effect immediately. There are, therefore, surely six months, perhaps nine, and it may be twelve, before the changes will take place. That is good time to prepare for them.

To prepare for them is much safer and much more decent than to wait till they take effect and then to complain of them and thus to invite confusion and (perhaps in some kinds of business) even panic.

A LITTLE LOOK BACKWARD

FIVE years ago individuals owned and directed nearly all the country's greatest public servants, the railroads. There is no one in the railroad world now with such autocratic powers — for good and for evil — as Mr. Edward H. Harriman and Mr. J. J. Hill then exercised. Mr. Hill has retired. Mr. Harriman is dead. Even the great combination which he formed has been outlawed by the United States Supreme Court. The Sherman Law has proved itself effective again in dissolving monopolies and doing it without damaging any real values. The work of Mr. Harriman's genius in improving his roads and their credit has not been undone. His work in making a combination easily capable of restraining trade against public interest has been undone.

Five years ago the Standard Oil Company seemed invincible as a practical monopoly. Its monopolistic power has been reduced — without reducing its prosperity — and the way has been opened for the other oil companies to do business. This was done by law and did not "hurt business."

Five years ago, secret campaign funds were still a corrupting influence in politics. The new laws and the lessons of the Clapp Committee will end that.

Tariffs written secretly by a few people to insure profits to themselves at the public expense are in a fair way to be knocked out when the special session of Congress meets in April. The new freedom of business which Governor Wilson preaches may be helped by such a bill as that which Senator Williams has before the upper house of Congress.

The idea is this: The only rights which a corporation has are those which the state gives it when it grants its charter. It is proper enough for Maine or Delaware to give corporations any powers that they choose — to use in Maine or Delaware; but it is another matter for such states to create corporations with predatory powers to prey upon the rest of the country. Congress has the power of regulating commerce between the states and, therefore, corporations engaged in such commerce. The underlying scheme of Senator Williams's bill is to bar from interstate trade corporations whose charters give them the power to break the common law against the restraint of trade.

In this there is no destruction of real values, no interruption to business more than a reorganization which businesses undertake with little trouble when it seems profitable. It is a legal and sane way toward a greater freedom, toward more and better business. The signs are pointing toward better times and we are going faster than most of us realize.

FOR A REAWAKENED CONSERVATION

IN THE coming change in the Government the enemies of conservation think that they see an opportunity to change the policy of the last twelve years and to break down conservation

as undertaken by the National Government. They will attack the whole conservation movement on the partisan political ground that it is a Roosevelt movement — with very short-sighted knowledge; for the first national forests (then called Forest Reserves) were created by President Cleveland; the Reclamation Service was fathered by Senator Newlands, a Democrat, and the better use of our rivers is particularly appealing to Democratic sections of the country.

Closely akin to the partisan attack is one based upon a so-called "states' rights" theory which argues that the states should own the national forests within their borders. This, too, is without historical warrant. The Government's general policy has not been to give the public domain to the different states. The public policy of the Homestead Act, accepted by both parties, was to get the public domain into the hands of individual users, not for speculation, but for home-building, not to enrich a few people, nor a state government, but to serve the nation. That is the purpose of the whole conservation policy. Only the National Government can carry out such a policy, because Nature did not foresee the political state lines and the forested watersheds, and the rivers do not lie within one state's limits.

This ground has all been gone over before and the majority of people, Democrats and Republicans alike, have time and again approved it, and the Democrats will make a grave error if Congress should take a step backward.

II

There are, however, two serious problems in the working out of the conservation policy: The first is the management of the great irrigation enterprises upon which the arid West puts its hope of becoming populous and prosperous. Some of these projects are developed by private capital. As in every other sort of enterprise, some of these are sound, some are unsound through ignorance, and some through dishonesty. The number of unsound private irrigation projects is alarming.

Then there are the projects in which private enterprise and the state governments coöperate under the terms of the Carey Act, and too large a proportion of these projects are in a precarious condition.

Thirdly, there are the projects of the United States Reclamation Service. The dams are well constructed but the Government has no means, so far, of properly securing settlers. It has no agency to sell its lands, as the private companies have, nor can it discriminate between applicants. It must take the bad with the good, those that are certain to fail with those that are likely to succeed. The Reclamation Service has no power properly to settle the lands that it has watered, nor has the Land Office or anybody else. Their settlement, therefore, goes on in a harum-scarum way or does not go on at all. The private irrigation companies, on the other hand, find it wise to pick and choose their settlers, and perhaps a third of their expense is for settlement. Added to this handicap, in common with all other construction work of the time, the Government's irrigating works cost more than the estimates. Moreover, the elemental injustice of treating everybody alike (able-bodied men with money and struggling widows without it) creates protests.

Time of course will settle this problem, but there is a tremendous task before the Western people, the states, and the Federal Government to clean up the present difficulties and prevent a temporary retrogression.

But greater than this arid land problem and almost untouched is the control of our rivers. The richest soil of the United States is in the most backward regions. There can be no real progress in the lower Mississippi Valley until the floods are controlled. In Egypt the Nile, controlled, has made a nation. Here, the Mississippi, with its periodic floods, has held back civilization upon the richest part of all our rich heritage. We have frittered away millions upon useless waterway improvements for "pork barrel" purposes, but our problem still remains. A great constructive task, far greater than all that the reclamation movement has so bravely accomplished, still confronts us — the con-

MRS. CARRIE CHAPMAN CATT

RECENTLY RETURNED FROM A TRIP AROUND THE WORLD IN THE INTEREST OF THE "WOMAN'S MOVEMENT" WHICH, SHE SAYS, IS DEEPLY STIRRING EVERY COUNTRY ON EARTH, INCLUDING ESPECIALLY INDIA, CHINA, AND THE PHILIPPINE ISLANDS

trol of our rivers, and the conquering and using of their rich valleys.

But to come back — the fact that every man who knows our country and the great physical problems that underlie our future well-being and who looks before and after — the fact that every such man should now face is the probability of a partisan attack on the whole conservation policy; and every legitimate influence should be brought to bear to sustain it. It is not a partisan policy. It is a fundamental, physical necessity. And the Democrats who attack it have no surer way to bring their party into disrepute and to spoil its chance of a long lease of power.

THE NEW FREEDOM

ALL political philosophies that are workable in a republic sound much alike in the general formulation of things because they all are predicated on the dogma of the rule of the people. There is nevertheless, a pole-wide difference between the Republican party's idea dominant during this last generation and the Democratic idea as held by Woodrow Wilson.

His political philosophy receives its definite minded statement in the articles that with this issue, begin in this magazine which are chapters of his forthcoming book "The New Freedom." This presentation has the advantage, as we look at it (however Mr. Wilson may himself regard it), of being cast somewhat in his spoken style. He has said these things, some here, some there; and they are put in logical sequence and welded together, making his expression of his political creed always in an emphatic and sometimes in an impassioned style.

Subsequent chapters will be on more definite aspects of "The New Freedom" and will discuss questions of monopolies, particularly the monopoly of opportunity; the tariff and other special privileges; and the overthrow of the bosses who deal in them. Through it all runs his fundamental philosophy that the public business should be done in the open.

THE INSIDIOUS BOUNTY IDEA

OUGHT the Federal Government to give money out of its treasury to build roads, to conduct schools, and to conduct the people's farms?

So successfully has the farmer vote been "played up" that we are in grave danger of two of those projects. It is a proper function of the Government to maintain a road-laboratory and to have a certain number of engineers to show any community how it may best construct its roads out of the most easily accessible material. It is a proper function of the Government to maintain a Bureau of Education which gives information about schools, school-houses, school-methods, and such like subjects. It is a proper function of the Government to maintain a farm-demonstration service which shall show a farmer in a neighborhood how he may improve his methods. All these things the Government now does. But it does not give money to build roads, nor to build schools, nor to maintain them (except certain old land-grants) nor does it cultivate the farmer's farm for him.

But there are bills in Congress to authorize the giving of unlimited millions to help road-building, in conjunction with the state and county authorities. So also there are bills to appropriate increasing sums to the agricultural colleges and other schools to help their good work forward. One such is the Page bill. Another such is the Lever-Smith bill. One of these has passed the Senate and the other has passed the House; and the friends of each hope to enact one or the other during this session of Congress.

In a word, the farmer is a name to conjure with. So is education. Put the two together and an irresistible appeal can be made to the benevolent Congressman who imagines that the giving of money will educate the farmer. It is a greatly mistaken benevolence. This is the latest, the subtlest, and the farthest-reaching result of the bounty theory of government.

Already many of the agricultural schools are organized to secure this legislation, forgetful that if this bounty comes to them the result will be to demoralize the

very people whom they are eager to serve. The educational progress of the people is now in every way sound. If it seem slow, it is more rapid than it ever was before. And the advance is normal and wholesome. It would be a grave mistake by too impatient, "good," benevolent men to commit the already overburdened General Government to a vast and increasing educational gratuity.

In effect it would be to put the farmer and the teacher on a Federal pension roll.

TURN STREAMS OF MONEY ON THE LAND

THE turning of a stream of money on the soil, wisely directed to productive uses, of course — that is the next great financial task in the sound economic development of the United States. We have used money to build railroads, to build cities, with sewers and parks and such necessary things; and all these are tasks, of course, which never end. But hitherto it has, as a rule, been the town that has had the beneficial uses of capital; for the town has been organized to procure it, to pay for it, and to use it wisely. The town *is* organization; it is this which distinguishes it from the country.

But now the great business that needs organization most, that can now pay for it and profit by it, is the business of bringing the land under more scientific culture and the business of organizing farm life. It has lagged for lack of money, and it has not known how to get it nor, perhaps, how to use it wisely. But conditions are fast changing. The farmer is become aware of his difficulty, of his handicap; and in most good farming communities there are now men who are capable of productively using money.

Speaking broadly, there is hardly an available acre in the United States that could not be made richly to repay the investment of more money to increase its productiveness and to reduce the culture of it to a business basis.

II

How can our capital be safely put there as it has hitherto been put, let us say, into railroads and such things? Mortgages can by several devices be put into "liquid" form — debentures issued on them which become part of the securities that investors buy, as the *Landschaften* in Germany. A somewhat different form of doing a similar thing is the *Credit Foncier* of France, which, however, has a form of government aid. These are improvements over our rough and costly mortgage loans in the United States, because under them money costs the farmer less.

Then there are the Raiffeisen credit societies which, starting in Germany somewhat more than half a century ago, have overrun all continental Europe, except Russia, and made their way into Ireland and even into India, working the miracle not only of putting cheap money within the farmer's reach but also of teaching him to use it wisely. It is the greatest school of financial management ever set up for the small countryman.

All these systems are under study and discussion as few such subjects have ever been in our economic life; and this attention to them shows that we are waking up to the necessity of financing the farm.

III

But this is not all, nor the greatest benefit of getting money on the land. If hundreds of millions of dollars could so be invested (and there is a pressing demand for farm-capital everywhere), this money would not only yield profit where profit is most needed and strengthen our whole economic structure where it is weakest, but our surplus millions could not then flow within the reach of our so-called money-trust, or credit-trust. The domination of a large part of the credit of the people by a few strong men and a few great interests, which is the inevitable and necessary result of our present system and habits, would cease. The money of the people would be on the land of the people, making every acre richer and more productive and more profitable. It would be at the bottom, where money ought to be — where it can lift most.

In a word, so fast as we set free the man in our fields, we set men free elsewhere also; and this is one of the qualities of

economic freedom. Every move to work out this problem is a move for the fundamental betterment of American life.

A COUNTRY SCHOOL FAIR

THE country school is coming to its own, one here, one there; one in one way, and one in another way. For example: In Leesburg, Va., the Loudoun County schools late last fall held a fair. Such county school fairs have come to be an important element of our rural school work. By 10 o'clock in the morning the streets were a surging throng of school children, their parents, and their friends from all parts of the county. And they were still coming in, by trolley, in school wagons, in large farm wagons bedded with straw, on horseback, in automobiles, and in buggies. By 11 o'clock it was estimated that there were more people in Leesburg than had ever before been drawn to that town and they had come at the call of the child.

The exhibits were competitive and were open to all the schools of the county. The printed catalogue of the school fair gave a definite score card for every exhibit in the schedule and a list of the prizes to be awarded. To illustrate the scope of activities: In the boys' corn club prize list there were twenty-two prizes offered for the largest yield per acre, for the seventy bushels or more per acre at least cost, for the best ten ears, for the best ear, the best letter and report of the work. In shop work, prizes were offered for the best set of book shelves, the best axe handle, the best wooden sled, the best set of garden tools, the best bird-house. In the arts of the home, the girls competed for prizes given for the best pound of butter, the best cake, the best loaf of bread, the best glass of apple jelly, for the best work in making buttonholes, for dressing a doll, for embroidering a belt and collar, for putting a patch on striped material. There was competition in cut flowers, wild flowers, and native woods. There were compositions, maps, and exhibits of drawing. During the morning there was a contest in spelling and arithmetic at the Leesburg high school.

The exhibit halls could accommodate but a small part of the crowd at any one time; to provide for the overflow, a band played all morning at the court house and a school orchestra gave a concert at the opera house.

In the early afternoon came the school parade. It was formed on the grounds of the court house and traversed the main streets of the town. Every school had its colors, its banners, its school songs and yells. You never saw a finer display of youthful enthusiasm on an athletic field. The parade ended at the opera house, where Governor Mann and State Superintendent Eggleston talked to the people in the interest of better roads, better schools, better farming.

The day closed with the awarding of the prizes from the court house steps. There was a brief recital of the educational work of Jefferson and of Lee; and these two sons of the Commonwealth were held up before the assembled schools as examples of patriotism and devoted citizenship. Then came the climax of the day's display of school spirit with the awarding of the long list of prizes. The name of every winner was greeted with an outburst of applause by his friends and a yell by his school.

These throngs of men and women and children had come from their farms, their schools, their banks, their business, to join in the celebration of a common interest. For this one day town and country had been one; in the presence of the child, neighborhood differences and party strifes had been forgotten; and out of it all there had come a quickened sense of the common task, a larger vision of the opportunities and responsibilities of men for the country school and a better knowledge of the sorts of service it may render.

A SENSIBLE DIVORCE LAW

IN NOVEMBER, 1909, the late King Edward of England appointed a Royal Commission on Divorce and Matrimonial Causes. The Commissioners were chosen from the most distinguished men and women of Great Britain. The report of the Commission was made public after the examination of 246 witnesses and after

seventy-one sittings. A minority report was signed by the Archbishop of York and two others. The women signed the majority report.

This report of the majority sweeps aside the traditional English theory that marriage is solely a religious covenant and adopts whole-heartedly the view that marriage is a legal contract so far as the parties to it are concerned and a social covenant so far as Society is concerned. Applying this view, it recommends a wide extension of the grounds of divorce to accommodate the marriage relation to the known human tendencies that affect personal morals and the public good. These grounds are as follows:

(1) Adultery.
(2) Desertion for three years and upward.
(3) Cruelty.
(4) Incurable insanity, after five years' confinement.
(5) Habitual drunkenness, found incurable after three years from a first order of separation.
(6) Imprisonment under a commuted death sentence.

It is an old injustice of the English law that it requires all complainants in divorce causes to present their case before a court in London. This law has made divorce an impossibility to the poor and to most persons of ordinary income whose residence was outside London; and the denial of divorce under many common conditions has undoubtedly tended to lower the standard of public morals. One recommendation of the Commission is that divorce courts be held in all parts of the country to hear cases in which the joint income of the husband and wife does not exceed $1,500 and their property does not exceed $1,000 in value.

The Commission unanimously recommends that these courts be empowered to declare marriages null for the following reasons:

(1) Unsound mind.
(2) Epilepsy and recurrent insanity.
(3) Specific disease.
(4) When a woman is in a condition which renders marriage a fraud upon the husband.
(5) Wilful refusal to perform the duties of marriage.

These recommendations, both of grounds for divorce and of grounds for nullifying marriage, are probably as good a statement as can be made of the most enlightened modern opinion. They recognize the limitations of human nature and would probably encourage morality. It is interesting to note that the majority report proceeds upon the assumption that to promote morality and to conserve human happiness was the Commission's primary duty.

Another unanimous recommendation of the Commission is that restrictions be placed upon the publication of reports of divorce cases, even to a permanent prohibition of publication of portions of the evidence at the discretion of the judge; that no newspaper accounts of the proceedings be permitted until after the case is closed; and that the printing of pictures of the parties to a divorce suit be prohibited.

A study of the Commission's report is useful for this reason: it might well form a basis for the propaganda of those social reformers who propose a uniform divorce law for the United States. The recommendations are a rational mean between the conservatism of the laws of New York and of the laxity of the laws of Nevada; and public opinion could probably be united in all the states upon a programme so sane and moderate as this.

THE RETRACTION OF AN ERROR

IN AN article in the World's Work for May, 1912, entitled "What the Dictograph Is," the following sentence appeared: "In October, 1911, the dictograph procured the conviction of Mayor Thomas E. Knotts, of Gary, Ind., on a charge of receiving a bribe of $5,000."

Of course, this sentence was published in good faith and wholly without malice. Its publication was incidental to a description of the various purposes of which the dictograph had been utilized. The editors of the World's Work now learn that this statement was not correct They greatly regret that this injustice has been done to Mr. Knotts, and gladly make amends by publishing this correction of the unfortunate error, in the same conspicuous way in which the original statement was published.

THE NEW FREEDOM

A CALL FOR THE EMANCIPATION OF THE GENEROUS ENERGIES OF A PEOPLE

BY

WOODROW WILSON

I

THE OLD ORDER CHANGETH

THERE is one great basic fact which underlies all the questions that are discussed on the political platform at the present moment. That singular fact is that nothing is done in this country as it was done twenty years ago.

We are in the presence of a new organization of society. Our life has broken away from the past. The life of America is not the life that it was twenty years ago; it is not the life that it was ten years ago. We have changed our economic conditions, absolutely, from top to bottom; and, with our economic society, the organization of our life. The old political formulas do not fit the present problems; they read now like documents taken out of a forgotten age. The older cries sound as if they belonged to a past age which men have almost forgotten. Things which used to be put into the party platforms of ten years ago would sound antiquated if put into a platform now. We are facing the necessity of fitting a new social organization, as we did once fit the old organization, to the happiness and prosperity of the great body of citizens; for we are conscious that the new order of society has not been made to fit and provide the convenience or prosperity of the average man. The life of the nation has grown infinitely varied. It does not centre now upon questions of governmental structure or of the distribution of governmental powers. It centres upon questions of the very structure and operation of society itself, of which government is only the instrument. Our development has run so fast and so far along the line sketched in the earlier day of constitutional definition, has so crossed and interlaced those lines, has piled upon them

such novel structures of trust and combination, has elaborated within them a life so manifold, so full of forces which transcend the boundaries of the country itself and fill the eyes of the world, that a new nation seems to have been created which the old formulas do not fit or afford a vital interpretation of.

We have come upon a very different age from any that preceded us. We have come upon an age when we do not do business in the way in which we used to do business — when we do not carry on any of the operations of manufacture, sale, transportation, or communication as men used to carry them on. There is a sense in which in our day the individual has been submerged. In most parts of our country men work for themselves, not as partners in the old way in which they used to work, but as employees — in a higher or lower grade — of great corporations. There was a time when corporations played a very minor part in our business affairs, but now they play the chief part, and most men are the servants of corporations.

You know what happens when you are the servant of a corporation. You have in no instance access to the men who are really determining the policy of the corporation. If the corporation is doing the things that it ought not to do, you really have no voice in the matter and must obey the orders, and you have with deep mortification to co-operate in the doing of things which you know are against the public interest. Your individuality is swallowed up in the individuality and purpose of a great organization.

It is true that, while most men are thus submerged in the corporation, a few, a very few, are exalted to power which as individuals they could never have wielded. Through the great organizations of which they are the heads, a few are enabled to play a part unprecedented by anything in history in the control of the business operations of the country and in the determination of the happiness of great numbers of people.

Yesterday, and ever since history began, men were related to one another as individuals. To be sure there were the family, the Church, and the State, institutions which associated men in certain limited circles of relationships. But in the ordinary concerns of life, in the ordinary work, in the daily round, men dealt freely and directly with one another. To-day, the everyday relationships of men are largely with great impersonal concerns, with organizations, not with other individual men.

Now this is nothing short of a new social age, a new era of human relationships, a new stage-setting for the drama of life.

In this new age we find, for instance, that our laws with regard to the relations of employer and employee are in many respects wholly antiquated and impossible. They were framed for another age, which nobody now living remembers, which is, indeed, so remote from our life that it would be difficult for many of us to understand it if it were described to us. The employer is now generally a corporation or a huge company of some kind; the employee is one of hundreds or of thousands brought together, not by individual masters whom they know and with whom they have personal relations, but by agents of one sort or another. Workingmen are marshaled in great numbers for the performance of a multitude of particular tasks under a common discipline. They generally use dangerous and powerful machinery, over whose repair and renewal they have no control. New rules must be devised with regard to their obligations and their rights, their obligations to their employers and their responsibilities to one another. New rules must be devised for their protection, for their compensation when injured, for their support when disabled.

There is something very new and very big and very complex about these new relations of capital and labor. A new economic society has sprung up, and we must effect a new set of adjustments. We must not pit power against weakness. The employer is generally, in our day, as I have said, not an individual, but a powerful group; and yet the workingman when dealing with his employer is still, under our existing law, an individual.

Why is it that we have a labor question at all? It is for the simple and very sufficient reason that the laboring man and the employer are not intimate associates now, as they used to be in time past. Most of our laws were formed in the age when employer and employees knew each other, knew each other's characters, were associates with each other, dealt with each other as man with man. That is no longer the case. You not only do not come into personal contact with the men who have the supreme command in those corporations, but it would be out of the question for you to do it. Our modern corporations employ thousands, and in some instances hundreds of thousands, of men. The only persons whom you see or deal with are local superintendents or local representatives of a vast organization, which is not like anything that the workingmen of the time in which our laws were framed knew anything about. A little group of workingmen, seeing their employer every day, dealing with him in a personal way, is one thing, and the modern body of labor engaged as employees of the huge enterprises that spread all over the country, dealing with men of

whom they can form no personal conception, is another thing. A very different thing. You never saw a corporation, any more than you ever saw a government. Many a workingman to-day never saw the body of men who are conducting the industry in which he is employed. And they never saw him. What they know about him is written in ledgers and books and letters, in the correspondence of the office, in the reports of the superintendents. He is a long way off from them.

So what we have to discuss is, not wrongs which individuals intentionally do — I do not believe there are a great many of those — but the wrongs of the system. I want to record my protest against any discussion of this matter which would seem to indicate that there are bodies of our fellow-citizens who are trying to grind us down and do us injustice. There are some men of that sort. I don't know how they sleep o'nights, but there are men of that kind. Thank God they are not numerous. The truth is, we are all caught in a great economic system which is heartless. The modern corporation is not engaged in business as an individual. When we deal with it we deal with an impersonal element, a material piece of society. A modern corporation is a means of coöperation in the conduct of an enterprise which is so big that no one man can conduct it, and which the resources of no one man are sufficient to finance. A company is formed; that company puts out a prospectus; the promoters expect to raise a certain fund as capital stock. Well, how are they going to raise it? They are going to raise it from the public in general, some of whom will buy their stock. The moment that begins, there is formed — what? A joint stock corporation. Men begin to pool their earnings, little piles, big piles. A certain number of men are elected by the stockholders to be directors, and these directors elect a president. This president is the head of the undertaking, and the directors are its managers.

Now, do the workingmen employed by that stock corporation deal with that president and those directors? Not at all. Does the public deal with that president and that board of directors? It does not. Can anybody bring them to account? It is next to impossible to do so. If you undertake it you will find it a game of hide and seek, with the objects of your search taking refuge now behind the tree of their individual personality, now behind that of their corporate irresponsibility.

And do our laws take note of this curious state of things? Do they even attempt to distinguish between a man's act as a corporation director and as an individual? They do not. Our laws still deal with us on the basis of the old system. The law is still living in the dead

past which we have left behind. This is evident, for instance, with regard to the matter of employers' liability for workingmen's injuries. Suppose that a superintendent wants a workman to use a certain piece of machinery which it is not safe for him to use, and that the workman is injured by that piece of machinery. Our courts have held that the superintendent is a fellow-servant, or, as the law states it, a fellow-employee, and that, therefore, the man cannot recover damages for his injury. The superintendent who probably engaged the man is not his employer. Who is his employer? And whose negligence could conceivably come in there? The board of directors did not tell the employee to use that piece of machinery; and the president of the corporation did not tell him to use that piece of machinery. And so forth. Don't you see by that theory that a man never can get redress for negligence on the part of the employer? When I hear judges reason upon the analogy of the relationships that used to exist between workmen and their employers a generation ago, I wonder if they have not opened their eyes to the modern world. You know, we have a right to expect that judges will have their eyes open, even though the law which they administer hasn't awakened.

Yet that is but a single small detail illustrative of the difficulties we are in because we have not adjusted the law to the facts of the new order.

Since I entered politics, I have chiefly had men's views confided to me privately. Some of the biggest men in the United States, in the field of commerce and manufacture, are afraid of somebody, are afraid of something. They know that there is a power somewhere so organized, so subtle, so watchful, so interlocked, so complete, so pervasive, that they had better not speak above their breath when they speak in condemnation of it.

They know that America is not a place of which it can be said, as it used to be, that a man may choose his own calling and pursue it just so far as his abilities enable him to pursue it; because to-day, if he enters certain fields, there are organizations which will use means against him that will prevent his building up a business which they do not want to have built up; organizations that will see to it that the ground is cut from under him and the markets shut against him. For if he begins to sell to certain retail dealers, to any retail dealers, the monopoly will refuse to sell to those dealers, and those dealers will be afraid and will not buy the new man's wares.

And this is the country which has lifted to the admiration of the world its ideals of absolutely free opportunity, where no man is sup-

posed to be under any limitation except the limitations of his character and of his mind; where there is supposed to be no distinction of class, no distinction of blood, no distinction of social status, but where men win or lose on their merits.

I lay it very close to my own conscience as a public man whether we can any longer stand at our doors and welcome all newcomers upon those terms. American industry is not free, as once it was free; American enterprise is not free; the man with only a little capital is finding it harder to get into the field, more and more impossible to compete with the big fellow. Why? Because the laws of this country do not prevent the strong from crushing the weak. That is the reason, and because the strong have crushed the weak, the strong dominate the industry and the economic life of this country. No man can deny that the lines of endeavor have more and more narrowed and stiffened; no man who knows anything about the development of industry in this country can have failed to observe that the larger kinds of credit are more and more difficult to obtain, unless you obtain them upon the terms of uniting your efforts with those who already control the industries of the country; and nobody can fail to observe that any man who tries to set himself up in competition with any process of manufacture which has been taken under the control of large combinations of capital will presently find himself either squeezed out or obliged to sell and allow himself to be absorbed.

There is a great deal that needs reconstruction in the United States. I should like to take a census of the business men — I mean the rank and file of the business men — as to whether they think that business conditions in this country, or rather whether the organization of business in this country, is satisfactory or not. I know what they would say if they dared. If they could vote secretly they would vote overwhelmingly that the present organization of business was meant for the big fellows and was not meant for the little fellows; that it was meant for those who are at the top and was meant to exclude those who are at the bottom; that it was meant to shut out beginners, to prevent new entries in the race, to prevent the building up of competitive enterprise that would interfere with the monopolies which the great trusts have built up.

What this country needs above everything else is a body of laws which will look after the men who are on the make rather than the men who are already made. Because the men who are already made are not going to live indefinitely, and they are not always kind enough to leave sons as able and as honest as they are.

The originative part of America, the part of America that makes new enterprises, the part into which the ambitious and gifted workingman makes his way up, the class that saves, that plans, that organizes, that presently spreads its enterprises until they have a national scope and character — that middle class is being more and more squeezed out by the processes which we have been taught to call processes of prosperity. Its members are sharing prosperity, no doubt; but what alarms me is that they are not *originating* prosperity. No country can afford to have its prosperity originated by a small controlling class. The treasury of America does not lie in the brains of the small body of men now in control of the great enterprises that have been concentrated under the direction of a very small number of persons. The treasury of America lies in those ambitions, those energies, that cannot be restricted to a special favored class. It depends upon the inventions of unknown men, upon the originations of unknown men, upon the ambitions of unknown men. Every country is renewed out of the ranks of the unknown, not out of the ranks of those already famous and powerful and in control.

There has come over the land that un-American set of conditions which enables a small number of men who control the Government to get favors from the Government; by those favors to exclude their fellows from equal business opportunity; by those favors to extend a network of control that will presently drive every industry in the country, and so make men forget the ancient time when America lay in every hamlet, when America was to be seen on every fair valley, when America displayed her great forces on the broad prairies, ran her fine fires of enterprise up over the mountain sides and down into the bowels of the earth, and eager men were everywhere captains of industry, not employees; not looking to a distant city to find out what they might do, but looking about among their neighbors, finding credit according to their character, not according to their connections, finding credit in proportion to what was known to be in them and behind them, not in proportion to the securities they held that were approved where they were not known. In order to start an enterprise now, you have to be authenticated, in a perfectly impersonal way, not according to yourself, but according to what you own that somebody else approves of your owning. You cannot begin such an enterprise as those that have made America until you are so authenticated, until you have succeeded in obtaining the good-will of large allied capitalists. Is that freedom? That is dependence, not freedom.

We used to think in the old-fashioned days when life was very

simple that all that government had to do was to put on a policeman's uniform, and say, "Now don't anybody hurt anybody else." We used to say that the ideal of government was for every man to be left alone and not interfered with, except when he interfered with somebody else; and that the best government was the government that did as little governing as possible. That was the idea that obtained in Jefferson's time. But we are coming now to realize that life is so complicated that we are not dealing with the old conditions, and that the law has to step in and create the conditions under which we live, the conditions which will make it tolerable for us to live.

Let me illustrate what I mean: It used to be true in our cities that every family occupied a separate house of its own, that every family had its own little premises, that every family was separated in its life from every other family. That is no longer the case in our great cities. Families live in tenements, they live in flats, they live on floors; they are piled layer upon layer in the great tenement houses of our crowded districts, and not only are they piled layer upon layer, but they are associated room by room, so that there is in every room, sometimes, in our congested districts, a separate family. In some foreign countries they have made much more progress than we in handling these things. In the city of Glasgow, for example (Glasgow is one of the model cities of the world), they have made up their minds that the entries and the hallways of great tenements are public streets. Therefore, the policeman goes up the stairway, and patrols the corridors; the lighting department of the city sees to it that the halls are abundantly lighted. The city does not deceive itself into supposing that that great building is a unit from which the police are to keep out and the civic authority to be excluded, but it says: "These are public highways, and light is needed in them, and control by the authority of the city."

I liken that to our great modern industrial enterprises. A corporation is very like a large tenement house; it isn't the premises of a single commercial family; it is just as much a public affair as a tenement house is a network of public highways.

When you offer the securities of a great corporation to anybody who wishes to purchase them, you must open that corporation to the inspection of everybody who wants to purchase. There must, to follow out the figure of the tenement house, be lights along the corridors, there must be police patrolling the openings, there must be inspection wherever it is known that men may be deceived with regard to the contents of the premises. If we believe that fraud

lies in wait for us, we must have the means of determining whether our suspicions are well founded or not. Similarly, the treatment of labor by the great corporations is not what it was in Jefferson's time. Whenever bodies of men employ bodies of men, it ceases to be a private relationship. So that when courts hold that workingmen can not peaceably dissuade other workingmen from taking employment, and base the decision upon the analogy of domestic servants, they simply show that their minds and understandings are lingering in an age which has passed away. This dealing of great bodies of men with other bodies of men is a matter of public scrutiny, and should be a matter of public regulation.

Similarly, it was no business of the law in the time of Jefferson to come into my house and see how I kept house. But when my house, when my so-called private property, became a great mine, and men went along dark corridors amidst every kind of danger in order to dig out of the bowels of the earth things necessary for the industries of a whole nation, and when it came about that no individual owned these mines, that they were owned by great stock companies, then all the old analogies absolutely collapsed, and it became the right of the government to go down into these mines to see whether human beings were properly treated in them or not; to see whether accidents were properly safeguarded against; to see whether modern economical methods of using these inestimable riches of the earth were followed or were not followed. If somebody puts a derrick improperly secured on top of a building or overtopping the street, then the government of the city has the right to see that that derrick is so secured that you and I can walk under it and not be afraid that the heavens are going to fall on us. Likewise in these great beehives where in every corridor swarm men of flesh and blood, it is the privilege of the government, whether of the state or of the United States, as the case may be, to see that human life is properly cared for, and that human lungs have something to breathe.

These, again, are merely illustrations of conditions. We are in a new world struggling under old laws. As we go inspecting our lives to-day, surveying this new scene of centralized and complex society, we shall find many more things out of joint.

One of the most alarming phenomena of the time — or rather it would be alarming if the Nation had not awakened to it and shown its determination to control it — one of the most significant signs of the new social era is the degree to which government has become associated with business. I speak, for the moment, of the control

over the Government exercised by Big Business. Behind the whole subject, of course, is the truth that, in the new order, government and business must be associated, closely. But that association is, at present, of a nature absolutely intolerable; the precedence is wrong, the association is upside down. Our Government has been for the past few years under the control of heads of great allied corporations with special interests. It has not controlled these interests and assigned them a proper place in the whole system of business; it has submitted itself to their control. As a result, there have grown up vicious systems and schemes of governmental favoritism (the most obvious being the extravagant tariff), far-reaching in effect upon the whole fabric of life, touching to his injury every inhabitant of the land, laying unfair and impossible handicaps upon competitors, imposing taxes in every direction, stifling everywhere the free spirit of American enterprise.

Now this has come about naturally; as we go on, we shall see how very naturally. It is no use denouncing anybody, or anything, except human nature. Nevertheless, it is an intolerable thing that the government of the Republic should have got so far out of the hands of the people; should have been captured by interests which are special and not general. In the train of this capture follow the troops of scandals, wrongs, indecencies, with which our politics swarm.

There are cities in America of whose government we are ashamed. There are cities everywhere, in every part of the land, in which we feel that, not the interests of the public, but the interests of special privileges of selfish men, are served; where contracts take precedence over public interest. Not only in big cities is this the case. Have you not noticed the growth of socialistic sentiment in the smaller towns? Not many months ago I stopped at a little town in Nebraska while my train lingered, and I met on the platform a very engaging young fellow, dressed in overalls, who introduced himself to me as the mayor of the town, and added that he was a Socialist. I said, "What does that mean? Does that mean that this town is socialistic?" "No, sir," he said; "I have not deceived myself; the vote by which I was elected was about 20 per cent. socialistic and 80 per cent. protest." It was protest against the treachery to the people and those who led both the other parties of that town.

All over the Union people are coming to feel that they have no control over the course of affairs. I live in one of the greatest states in the Union, which was at one time in slavery. Until two years

ago we had witnessed with increasing concern the growth in New Jersey of a spirit of almost cynical despair. Men said, "We vote; we are offered the platform we want; we elect the men who stand on that platform, and we get absolutely nothing." So they began to ask, "What is the use of voting? We know that the machines of both parties are subsidized by the same persons, and therefore it is useless to turn in either direction."

It is not confined to some of the state governments and those of some of the towns and cities. We know that something intervenes between the people of the United States and the control of their own affairs at Washington. It is not the people who have been ruling there of late.

Why are we in the presence, why are we at the threshold, of a revolution? Because we are profoundly disturbed by the influences which we see reigning in the determination of our public life and our public policy. There was a time when America was blithe with self-confidence. She boasted that she, and she alone, knew the processes of popular government; but now she sees her sky overcast; she sees that there are at work forces which she did not dream of in her hopeful youth.

Don't you know that some man with eloquent tongue, without conscience, who did not care for the Nation, could put this whole country into a flame? Don't you know that this country from one end to another believes that something is wrong? What an opportunity it would be for some man without conscience to spring up and say: "This is the way. Follow me!" — and lead in paths of destruction!

The old order changeth — changeth under our very eyes, not quietly and equably, but swiftly and with the noise and heat and tumult of reconstruction.

I suppose that all struggle for law has been conscious, that very little of it has been blind or merely instinctive. It is the fashion to say, as if with superior knowledge of affairs and of human weakness, that every age has been an age of transition, and that no age is more full of change than another; yet in very few ages of the world can the struggle for change have been so widespread, so deliberate, or upon so great a scale as in this in which we are taking part.

The transition we are witnessing is no equable transition of growth and normal alteration; no silent, unconscious unfolding of one age into another, its natural heir and successor. Society is looking itself

over, in our day, from top to bottom; is making fresh and critical analysis of its very elements; is questioning its oldest practices as freely as its newest, scrutinizing every arrangement and motive of its life; and it stands ready to attempt nothing less than a radical reconstruction, which only frank and honest counsels and the forces of generous coöperation can hold back from becoming a revolution. We are in a temper to reconstruct economic society, as we were once in a temper to reconstruct political society, and political society may itself undergo a radical modification in the process. I doubt if any age was ever more conscious of its task or more unanimously desirous of radical and extended changes in its economic and political practice.

We stand in the presence of a revolution — not a bloody revolution, America is not given to the spilling of blood — but a silent revolution whereby America will insist upon recovering in practice those ideals which she has always professed, upon securing a government devoted to the general interest and not to special interests.

We are upon the eve of a great reconstruction. It calls for creative statesmanship as no age has done since that great age in which we set up the government under which we live, that government which was the admiration of the world until it suffered wrongs to grow up under it which have made many of our own compatriots question the freedom of our institutions and preach revolution against them. I do not fear revolution. I have unshaken faith in the power of America to keep its self-possession. Revolution will come in peaceful guise, as it came when we put aside the crude government of the Confederation and created the great Federal Union which governed individuals, not states, and which has been these 130 years our vehicle of progress. Some radical changes we must make in our law and practice. Some reconstructions we must push forward, which a new age and new circumstances impose upon us. But we can do it all in calm and sober fashion, like statesmen and patriots.

I do not speak of these things in apprehension, because all is open and above-board. This is not a day in which great forces rally in secret. The whole stupendous programme must be publicly planned and canvassed. Good temper, the wisdom that comes of sober counsel, the energy of thoughtful and unselfish men, the habit of coöperation and of compromise which has been bred in us by long years of free government in which reason rather than passion has been made to prevail by the sheer virtue of candid and universal debate, will enable us to win through to still another great age without violence.

WHAT THE WORLD'S WORK IS TRYING TO DO

BY

WALTER H. PAGE

MY ASSOCIATES ask that I write what we are trying to do with this magazine, thereby going squarely against the first principle of good editing. That first principle is that every piece published shall be interesting; and in such an article there is less a tale to tell than an explanation to make.

The group of men who direct the WORLD'S WORK have a very definite aim, however often they miss it, and we are very much in earnest. Earnestness, mind you, does not mean solemnity, and we try to keep it from meaning dullness. The aim is — every reader of the magazine knows it as well as we do — so to report and to interpret representative activities of our time as to give the reader a well-proportioned knowledge of what sort of things are happening in the world — in the American world in particular. It may be a political campaign, it may be a woman's "movement," it may be the building of a great dam across the Mississippi River, it may be explanations of scientific discovery and of new scientific theories, it may be the industrial progress of the Northwest or of the Southeast, it may be the breeding of better grain or of better cotton, the making of fitter schools, the waste of money and the degradation of men by unworthy pensions — it may be anything typical of the activities of the people and worthy of the attention of thoughtful persons; and in the course of a year the magazine ought to contain articles on all sorts of these important activities.

We work in constant conference; for it is all team-work. Every man knows and every man must know what every other one is doing; and in our conferences we decide what volunteer articles we shall accept and we make plans for our outside friends who help us write such articles, for examples, as Mr. Stockbridge went West to write, and as Professor Orth of Cornell is writing about the labor war.

It is a cheerful and exhilarating occupation; for we must keep an eye on all sorts of human activities and meet and learn from men of all helpful minds and callings. The real reward of the editorial life is in the friends and acquaintances that one has occasion (and necessity) to make. No sort of active and useful man or woman is foreign to our plans or purposes. Of course not even a much larger group of men than we are could possibly know many subjects thoroughly; but each of us has his own kinds of tasks — one, subjects of social welfare; another, political subjects; another, financial and commercial subjects; another, rural life and education, and so on; and each does his reading and makes acquaintances that lead to increasing knowledge of his group of subjects. Consequently we must go about the United States and see what men are doing. The theory is that at least one editor of the magazine shall visit every section of the country at least once a year, and, of course, at times other countries also. One of the most pleasing compliments ever paid to us was said in half jest by a man who had led a closet-life: "Why, you really regard Wyoming and Louisiana as parts of the United States." The real work of making a "live" magazine cannot be done in an office.

There is, therefore, no mystery about the work: the main thing to be said about it is that it is work, unceasing, hard work; but do not forget that it is interesting work. If an article does not interest us, it is pretty sure not to interest the reader; for we are men of different temperaments, of unanimity only in ideals and in purpose, men of different kinds of training, of somewhat different outlooks on life.

Yet nothing has ever appeared in the magazine about which we had any serious disagreement; and, of course, no man ever writes anything that he does not profoundly believe. The note of sincerity is as necessary in a magazine as it is in a man. You can't make any genuine periodical with "literary operatives." If we should encounter subjects or plans or policies about which there was radical disagreement, we should, I presume, leave them alone. So far we have not encountered them.

Nor is the editorial department the whole magazine. There is still wider team-work throughout the publishing house of which it is a part. It is co-ordinated with other activities, to the benefit of all. The other owners of the magazine at times contribute most helpfully to the stock of editorial ideas. There is a luncheon on every Wednesday at which all the editors and all the owners sit down to talk over the World's Work. One day the talk may turn on editorial subjects, another day on the financial condition of the business, another day on the manufacture of it, on another day on the advertising department; on another day on all these subjects. There are no secrets that one department or group keeps from the other. Such conferences would be of no value if they were not open and frank; and there is no opinion or suggestion ever held back for fear of anybody's disapproval. The atmosphere is as free as any group of men can make and keep it; for not a man has to do with the magazine who has any other interest to serve or any other business to engage him. You could not make a helpful and interesting periodical as an incident to any other business or "interest"; and many a one has failed by such an effort.

Of course, there is not unanimity about every detail in so large a body of men. Why should there be? For instance, when the political campaign came on last year, the policy of the magazine was determined by the editor, who is the court of last appeal, if there be any occasion for appeal. There were in the group some men who differed with the political policy of the magazine. What better corrective influence against sheer partisanship could be devised? This, I am sure, was a lucky circumstance — lucky in one instance at least; for when an article in proof was read by a dissenter he made the valuable criticism that it was less than fair to his side. The unnecessary cruelty of the criticism was omitted, and the magazine was the better for it — at least in temper.

Did I not warn you that all this is dull? I mean that the telling of it is uninteresting, for the doing of it is always interesting. For example: We described the farm demonstration work in the Southern States whereby two bales of cotton were made to grow where one bale grew before; and a gentleman in North Dakota read about it and set to work to have similar instruction given to the farmers in his state, at a cost of more than $80,000 a year. A missionary in India read about the eradication of the hookworm in our semi-tropical regions and he wrote for information. It happened that he lived at the place with which the American Hookworm Commission most desired to get into communication. A man came to this office one day and said: "You had a little article about farming profits in a certain part of the country last year. I read it and said that you had been imposed on. But I had occasion to visit the place last month and I invested $100,000 there. You didn't tell the story half strong enough." There are now in this office letters from men who say they have more than a million dollars to invest in farms, asking suggestions about soils and climates and markets and such like things. (One man, by the way, gives his whole time and takes much of the time of the editors, too, in answering questions about every conceivable thing.) Of course, many millions of dollars are invested in conservative securities on the advice of the financial department; and many magazines imitate the World's Work in maintaining such a department.

But these are obvious, concrete, reportable results. A better result is the influence on public opinion of some of the policies emphasized by the World's Work. Sometimes these are not popular. Take the abuse of the pension-roll as an ex-

ample. There has been a decided stiffening of opinion and of courage since Mr. Hale's and Mr. Charles Francis Adams's articles were published in the WORLD'S WORK two years ago. Many newspapers that had before been uninformed now demand that the roll be made public and thereby purged of unworthy names; and the opposition in Congress to "any old pension" scheme grows stronger yearly.

Evidences multiply of the effect of educational articles that the magazine has published. A description of a good school always suggests the same plan to persons in another part of the country.

This sort of thing has occurred time and again. The WORLD'S WORK has found a country preacher or a country teacher who did his job so well that there was inspiration for others in the story of it. As soon as a description of such a man's or woman's work was published they began to receive invitations to lecture and presently they found themselves so famous that they were called from their fields of labor to organize society in general. This is one of the misfortunes of fame.

The results that justify the magazine's existence are what educational folk, who love long words, call "inspirational." It carries to one man or to one group of men a story of what somebody else is doing and gives fruitful suggestions. For instance, an account of Dr. Dowling's health-train and of his energetic work toward the cleaning up of Louisiana set boards of health and sanitary officers at work in many other communities.

The first quality required to make a helpful magazine is a balanced judgment, an intellectual inability to be drawn off into the advocacy of any fad or cure-all, or to allow one's personal tastes and particular enthusiasms to dominate the whole periodical—in a word, the refusal to become sensational. "Movements" are necessary and desirable in the free life of the United States; but the free life of the United States is a very complex thing, and no "movement" carries all salvation with it. Good judgment calls for the reporting of all sorts of good work but for very wary acceptance of all men's burning enthusiasms. Common sense is the most useful quality that you can get into an editorial office.

In the execution of the task of making a magazine, the greatest practical difficulty is the difficulty of finding men who can write with simple directness and still put the glow of conviction and of "human interest" in their writing. I have on my desk now this report from one of my associates on a manuscript:

> "This is a horrible example of what a college professor can do to obscure a good idea by means of a magazine article. The idea itself is interesting and it emerges first on page 8."

Every word of this report is true. The first seven pages are dull commonplace — the same sort of things that thousands of writers have written as the first seven pages of a manuscript about thousands of subjects. One of these days we shall have post-graduate schools of writing at our universities, or somewhere else, where young men will be taught to omit at least half of what they feel moved to write "in a state of nature" — to present their messages directly and briefly, with charm and enthusiasm. It required ten years full of many experiments to get together (out of 20 or more men) the four who do the main work of making this magazine.

At intervals, we have asked blocks of our subscribers what parts or qualities of the WORLD'S WORK they think most highly of and what they find least helpful and we have asked for suggestions. Many corrective and suggestive comments come, but few constructive ideas — naturally enough, for it is not the business of men who buy the magazine to make it. But those who are kind enough to answer such inquiries do a great service by giving the editors, sometimes unconsciously, the point of view of the readers that they are trying to serve. It is always helpful to meet and to talk with or to read letters from such persons.

The truth is, the successful editing of such a magazine is in reality the interpretation of the people, their revelation to themselves; and this cannot be done except by men who know the reading and thoughtful people of the whole country, or as many of them as possible.

This is what with all humility and ear-

nestness we are trying to do, regarding the magazine as an instrument of reporting the people's activities and thought in the widest and most helpful and sympathetic way, with directness of speech and with a joyful confidence in the soundness of American life. This leaves no room for merely personal journalism nor for becoming the organ of any "cause" or "party" or man or doctrine or school. The whole American people is a good master to serve. But any sect or section or party of them would be a tyrannical master. The evangelist has his uses but they are not the highest uses.

The American public is surfeited with magazines; for, as a business, the making of them is greatly overdone. Many lead a precarious life. Many are bankrupt. Many more, whose purpose is chiefly commercial, try this tack and then that; for profitable sensations enough cannot be found to maintain them. The public does not show the nicest discrimination — in fact, there are many publics; but in the long run the half-dozen or more magazines that serve thoughtful people year in and year out by honest work find permanent friends, whom it is a great privilege and joy to serve. One of the most pleasing facts about the WORLD'S WORK is that a much larger percentage of its subscribers renew their subscriptions year after year than is usual with most magazines. This is a guarantee of sufficient stability to make us sure that we are doing some service and that it is a natural and normal and not a merely spasmodic service.

And on those rare occasions when it seems no violation of good taste to write about the magazine (and it is hoped that this is such an occasion) the one thought that comes first and comes strongest is gratitude for the appreciation that has been shown year after year by readers in all the walks of life. You may see in our files a letter from an illiterate carpenter in Maine close beside a letter from a President of the United States and a president of a university, and a banker and a farmer — from all sorts of men — saying that they find the WORLD'S WORK worth while. That's reward enough; and what we are trying to do is to deserve the thanks that men like these send us, by a real service in reporting the significant activities of our many-sided life with the hopeful and helpful spirit that every well-balanced man must have when he studies it in the large. To know the American people in our time is a great privilege and a constant inspiration; and we do on occasion — as on a New Year — feel that such work brings us a realization of the majesty of our democracy.

INVENTORS AND YOUR MONEY

INVENTORS are, with some exceptions, among the most expensive friends in the world. This conclusion is based upon a story, among hundreds of similar ones, told to me by a business man on the day this article was written. A friend of his, a young man of capital and brains, met an inventor in disguise at a golf club two years ago this summer. The young capitalist was fascinated by his chance-met friend. This led to an opportunity for the latter to disclose a new machine that he had invented which would form the basis of an entirely new system of telegraphy.

The capitalist at first was interested, then was deeply interested, and finally was immersed in the idea. He entered into a partnership with the inventor to complete the experiments and to carry the process through to a commercial conclusion. In September last the partnership was dissolved. It cost the youthful capitalist nearly $400,000, and it left the inventor just as poor as he was before. He was an honest but misguided inventor.

There have been thousands of such instances. From a long correspondence with the deluded victims of financial failures it may be said that there is hardly

any other lure so attractive to the unsophisticated investor as the financing of inventions that are supposed to be rivals of the telephone, telegraph, and electric light. A good many hundreds of companies are floated and their securities sold to the public in the United States every year that represent simply the possible future earning power of new mechanical inventions. If you get a collection of bond salesmen together, from the smaller cities and towns, and one of them happens to tell a story about the way the citizens of his town were taken in last year by some inventor or some company exploiting a new mechanical invention, you will find that almost every man of the group can match the story with another one just like it. Sometimes it is a local invention; but much more likely it is not a home product but an imported one from some other town or city. It would appear, from the stories that circulate, that a great majority of the inventions created and patented in this country every month are financed in the beginning by small contributions of capital collected from people of small means away from the financial centres of the country.

Of course, that is not true. It is easier to find traces of this kind of queer public flotations than it is to find the records of the thousands of similar experiments carried on in the big cities; but the fact probably is that more than three quarters of the inventions are financed on private money raised by little groups of venturesome people in New York, Boston, and other large cities, and by people who understand that every dollar put up in this way is risking total loss for an enormous profit.

To illustrate, there is a capitalist who is considered one of the powers in Wall Street. He is a director in three or four of the biggest banks, two of the biggest railroads, and several of the big industrial companies of the country. He rose from the ranks through fortunate industrial enterprise and is now reckoned to be worth many millions of dollars. This man has backed probably a score or more of new inventions. One of them was one of those bottles that are either hot or cold; seven or eight of them were electrical inventions of extraordinary character; several others have been processes of metal manufacture; almost all of them have been revolutionary. His name has not been publicly mentioned in connection with any of them although one or two have become well known national institutions.

That is the right way to float an invention. This man does not feel very keenly the amount of money necessary to experiment and to manufacture models or to do whatever else may be necessary to translate the vague and indefinite products of the brains of geniuses into commercial products that have a money value. He knows that he has taken a gamble in every instance and he goes ahead to take it without much misgiving. If he finds that he has to take a loss and write down what would be to most men a whole lot of money on the wrong side of his "experience account," he does it without going to law about it, though not always too graciously. If he wins, he cashes in when he thinks the time has come. He has guessed wrong more than once.

Again, a certain railroad president in New York is at present about as deeply interested in a new process of making steel rust-proof as he is in running the railroad of which the stockholders made him president. Not so very long ago a new compressed-gas proposition named as two of its directors the heads of two of the greatest industrial trusts in the country, and these men with their friends originally put up all the capital required to convert the idea of this gas into the gas itself and make it more or less a commercial product.

There is a mighty big difference in the way these wise and experienced financiers go into a proposition of this sort and the way the country minister, doctor, lawyer, or plain citizen buys the stock of a new invention. The way to catch the innocent layman is to take him a prospectus which starts off with the story of the Bell telephone, carefully omitting all the struggles through which Dr. Bell's invention passed before, with the generous aid of Mr. Hubbard and his friends, it became, almost by chance, a commercial propo-

sition, and forgetting to state that hundreds of shares of it were given away to liquidate bills payable in the early stages of the business. This part of the prospectus ends with a picture of the American Telephone & Telegraph Company to-day and leaves you with the impression that a dollar or so invested in telephone stock in the first place would now run up to thousands — or is it millions? — if you had held it in the meantime.

Having thus begun, the prospectus leads you gently up to and into a new invention that beats the telephone with ease. It does not make much difference what the invention is. The one that happened to come in the mails to-day was a simple little thing to take the place of gasolene in running an automobile, which will cut the cost of operating a machine down to about 10 per cent. of its present level. All you need to have to get a foothold in this company is a dollar, and it will almost certainly be as good as the Bell telephone ever was. Last week a man sitting in an automobile in lower Broadway handed out circulars about a newfangled tire that was a stranger to blowouts and punctures and it, too, was going to put the telephone in the shade. Nowadays, it may be noticed that the principal rivals of the telephone are in the automobile business, for that is the business in which the quickest fortunes are made—and lost.

After you have read the description of the invention, and mastered some of its details, you read on and find out perhaps where you can see the thing working and then, as a finale, where you can get the stock and how much it will cost you. Turn over the page and you will find some queer, vague testimonials with well known names printed beneath them. If you happen to be widely read you'll probably find out that these testimonials come from men eminent in their own fields but unskilled in mechanical matters or industrial affairs.

Nobody can guess how many millions of dollars have been sunk in worthless inventions year by year on the strength of prospectuses built along these lines. Certainly it runs into nine figures, and it has come, of course, in large part from the ignorant and the credulous and, unhappily, the men of little means.

Look, by way of contrast, at the way the man of money ventures a very small part of his big fortune in affairs of this sort.

He demands that a new invention pass first under the review of men qualified by experience and study to talk intelligently about it as a commercial proposition. If he has plenty of money to spare and has a taste for mechanical things he is willing to go in to a small extent after he has received competent advice that the thing proposed ought to be a money maker. Occasionally, of course, some miracle like the Keely motor swindle takes in hard-headed and otherwise successful business men, but it does not often happen. In the case of a chemist a few years ago who induced some practical business men to finance a little project for manufacturing camphor synthetically, they put the chemist in jail as soon as they discovered what was the matter with him.

No man can lay down a formula for judging an invention. There is one rule, however, that is worth while. It is that one should never pay any attention to what the inventor has to say. An inventor has got to be an optimist. A pessimist never invents anything because he starts out with the theory that the chances are it cannot be done. A real inventor sees only the facts that are favorable and ignores every consideration that would point to caution or conservatism in judging the efficiency or even the commercial value of the product he has invented. His opinion, therefore, is of no value except as a basis for other men to work on.

Another cardinal principle is not to invest more than a very small percentage of your available money in any one invention or new process. The chances are probably at least a hundred to one against the possibility of any new invention rivaling the great commercial inventions of any ten-year period. In other words, there are probably ten thousand inventions that are either unsuccessful or only successful in a small way, to one that makes a fortune for its backers.

A 100,000-ACRE BUSINESS

A TEXAS RANCH WORTH $5,000,000 WHICH CONDUCTS ITS VARIOUS DEPARTMENTS AS SEPARATE BUSINESS ENTERPRISES, WHICH OWNS ITS OWN TOWNS AND BANKS, AND WHICH PAYS GOOD SALARIES TO 5,000 CONTENTED PEOPLE

BY

THEODORE H. PRICE

ABOUT 1871, or some 40 years ago, there drifted into the southwestern part of Texas three young men. They were named Coleman, Fulton, and Mathis. Fulton was an Englishman and a civil engineer. Mathis and Coleman came from Kentucky and Tennessee.

The whole state was a cattle ranch. The unit of land measurement was not an acre or a section of 640 acres, but what is known as a "Spanish League," which is a little less than three miles square and contains 4,400 English acres.

These three young men, inspired by the love of adventure and the hope of gain, travelled southward from Texarkana until they came to the shores of the Gulf of Mexico. There they found a peninsula bounded by Copono Bay on one side and by Corpus Christi and Nueces bays on the other. It embraced in all about one half million acres of land. Title to this was acquired, some of it doubtless by preemption and some of it by purchase. It is said that not infrequently they were able to trade a pony for a Spanish League of the mesquite prairie. Competent judges are of the opinion that wherever cash was paid, the consideration probably did not exceed 50 or 75 cents an acre, if as much.

They ran what was probably the first fence line in the southern part of the state of Texas, across the northerly end of the peninsula, and thus asserted their right to ownership. The land was then available only as a cattle range and cattle were purchasable for as little as $2 or $3 a head. They got the cattle in north Texas, drove them south through their fence gates, and let them roam. Commercial communication with the markets of the world was only to be had from this part of Texas by water, but they were on the Gulf Coast, and on the Coast they erected a rendering establishment, where they found it profitable to kill cattle that were worth not more than $5 a head, for the tallow and hides that they would yield. The tallow and hides were shipped to New Orleans, some 500 miles distant, in small coasting vessels, and from there found a market through regular channels.

Of course, money was required for the development of even so crude an enterprise, and when it commenced to be needed one of the original partners, Mr. Mathis, withdrew, taking the northern part of the land for his share; and the other two men, Coleman and Fulton, formed a company which they called the Coleman-Fulton Pasture Company.

They took the stock of this company to Cincinnati, which was then the banking centre of the Southwest, and there induced Mr. David Sinton, a Cincinnati banker whom they knew, to buy part of it and lend them some money on the balance. Subsequently Mr. Sinton, who seems to have been a man of imagination, bought for himself and Mr. Joseph F. Green practically all the stock of the Coleman-Fulton Pasture Company.

At Mr. Sinton's death, the property passed into the control of Mr. Green and Mr. Charles P. Taft, who had married the only child of Mr. Sinton. During Mr. Sinton's lifetime he had sold off from time to time much of the property, until, of the tract originally controlled by Messrs. Coleman and Fulton, there was left about 100,000 acres.

Some thirteen or fourteen years ago, Mr. Taft and Mr. Green determined upon a policy of land improvement instead of land selling. Mr. Green went to the

land to live and develop it, and one bit of romance connected with the story is that he had not been there long before he met and married Miss Mathis, a daughter of one of the original trio of pioneers that, forty years before, had had the vision to foresee the possibilities of development in southwestern Texas.

A COMMERCIALIZED FARM

The progressive agricultural development and the commercial organization with which this story has to deal dates from Mr. Green's advent as manager of the property, and Mr. Taft's coöperation as financier. His brother, the President, visited the ranch about two years ago, and his presence made the existence of the Taft Ranch well known throughout the world. It is not, however, because of its size or because of the visit of the President that it is interesting to the many students of agricultural development who are to be found there from time to time. There are many other ranches in the United States that are larger, and in Mexico there are huge tracts of land under the ownership of one proprietor, but their agricultural development remains unaccomplished.

The Taft Ranch is interesting because it is a large agricultural undertaking thoroughly commercialized and highly organized. On it agriculture has become as business-like as any manufacturing concern. It is financed and managed like any other industrial organization.

There are four towns or villages on the property: Sinton, Taft, Gregory, and Portland. There are between 4,500 and 5,000 people on the tract, and 15,000 cattle, 5,000 sheep, 1,000 hogs, and 1,000 horses and mules. The administrative centres of the ranch are located at the two towns of Taft and Gregory, the main office and Mr. Green's headquarters being at Gregory. He occupies a handsome house called La Quinta on the bluff overlooking the Gulf of Mexico, and there he is to be found nearly every morning at dawn taking a swim in the surf. His principal associates and coadjutors in the management of the property are Mr. Joseph Tumlinson, who has been in charge of the live stock department of the ranch for ten or eleven years, and Professor Charles H. Alvord, formerly of Michigan and lately Dean of the Agricultural and Mechanical College of Texas. About a year ago, Mr. Green induced Professor Alvord to abandon a life of academic agriculture for one of practical farming and, as a result, the agricultural development of the Taft Ranch is being directed along the most scientific lines. These three gentlemen, Messrs. Green, Alvord, and Tumlinson, deserve well of the world. They have had the courage to undertake a solution of the greatest economic problem of the day by applying the most advanced commercial and scientific methods to cheapening the cost of food and making agricultural life attractive and profitable.

THE PRINCIPLES OF SUCCESS

In the last analysis, however, their policy seems to be governed by four fundamental and coördinate principles.

First, the welfare and comfort of their employees and subordinates. The farm houses and the smaller homes in which the hired laborers live, are all modern and comfortable. They are all connected by telephone or within easy reach of telephonic communication. They are connected by rail by the San Antonio and Aransas Pass Railway which runs from one end of the property to the other. The houses are, for the most part, supplied with electric lights, and with ice; for on the ranch is an ice plant with a capacity of about 50 tons daily. There is a very comfortable hotel owned and operated by the company. An exceptionally well appointed and modern hospital is maintained, to which those who are ill or injured may be sent, and where they may have the benefit of the most scientific attention from physicians and nurses.

There are two or three Protestant churches on the property and the company is now erecting a Catholic church for the convenience of the many Mexicans employed. The water supply, which is derived from artesian wells, is excellent, and the company is now constructing a 10-inch water main from its best well at Taft, north and south through the entire tract. Bathing houses, where employees

may refresh themselves by a dip in the surf, are provided. Well equipped stores, where even the most exacting can supply their wants at reasonable prices, are maintained, but there is no effort made to compel patronage. No intoxicants are permitted to be sold.

Second, the subdivision of authority and responsibility. Every department is under the management of a competent and well paid superintendent, who is held rigidly accountable for results. These men conduct their respective departments as if they were separate and independent commercial entities, but coöperation is nevertheless secured by frequent conferences, at which all are present. These conferences (presided over by either Mr. Green, Professor Alvord, or Mr. Tumlinson) not infrequently last during the whole forenoon, and are really deliberative assemblies at which every one is permitted the most unrestrained expression of his views.

Third, the application of the most scientific methods and the utilization of the latest and most efficient labor-saving machinery. The company owns many automobiles, seven gasolene power plows, a gasolene ditch and road making device, and an equipment of agricultural machinery that fills a shed covering approximately an acre.

Fourth, self-maintenance through the home production of food and wise economy in the use of all products and by-products. For years the corn and other live stock food raised on the ranch has been in excess of the requirements. The fertilizer produced from the blood and entrails of the cattle slaughtered at the packing house is all put back on the land. The skimmed milk produced at the dairy is fed to the pigs, and the cotton seed meal and hulls coming from the cotton oil mill are all fed to the cattle. The ranch is unlike most other farms, in that it is for the most part independent of the rest of the world for both its human and its animal food. The meat and vegetables that man requires are all produced and put in marketable condition there, and the food that cattle and horses require is likewise all produced there. The lesson that is to be derived from this practice is immeasurably important to the Southern farmer if he will only heed it.

These four fundamentals: namely, the comfort of the individual, the subdivision of authority and responsibility, the use of scientific methods and labor-saving machinery, and self-maintenance in the production of food, are the broad principles of the success of the Taft Ranch.

As a result of their application, the gross cash value of the things raised and sold exceeds one million dollars annually, and most of this money stays there because most of the things that are requisite to life, health, and happiness are produced there. The automobiles, textil fabrics, and the wheat flour that are used on the ranch must be bought elsewhere; but it is entirely logical that, within a very short time, the cotton production will be spun into yarn and woven into cloth at a cotton mill on the ranch.

The cattle business, for instance, is in charge of Mr. Tumlinson. He selects his subordinates, directs the breeding of the cattle and supervises his department free from interference. He has a farm upon which he produces much of the cattle food that is required to supplement the range grass, and if he finds it necessary to purchase other food, he buys it from the oil mill or the heads of the other departments which have a surplus, at the equivalent of the market prices for such stuff elsewhere. In his own department he is supreme, subject only to the direction of Mr. Green, who interferes with him but little.

The agricultural development is generally under the direction of Professor Alvord, who selects and directs the activities of his subordinates in this department.

The cotton land, of which there is about 8,000 acres on the property, is divided into tracts of from 1,200 to 2,000 acres each. Every tract is under the supervision of a superintendent, who contracts for its cultivation, either by day labor or on the tenant plan as may seem to him to be best. This superintendent is held responsible for the profit or loss shown by his department, and is debited with all costs of production and credited with all proceeds derived therefrom. Mr. Green intends to increase the acreage in cotton until 50,000 acres are in cultivation.

The hog ranch, so-called, is one of the

most interesting units of the enterprise. In combination with the dairy farm, it is in supreme control of a superintendent, who must make good or lose his job. Some sixty Jersey cows are there milked by machinery. The cream and milk are promptly separated and the skimmed milk is fed to 500 or 600 little pigs that have just been weaned. One of the most interesting and amusing sights of the ranch is the feeding of these little pigs. As these pigs grow to hoghood, they are fed, first upon corn and finally turned out to root for peanuts, of which there are forty or fifty acres planted for their special benefit. The peanut, next to 'mast" or acorn food, is supposed to produce the finest flavored bacon.

The sheep are under the special charge of the superintendent of the sheep ranch, and woe betide him if he prove a careless shepherd.

The cattle, hogs, and sheep, when in condition to be killed, are sold at current market rates to the Taft Packing House, an exceedingly modern and complete establishment located at Taft. The packing house is an independent commercial entity, which pays for its cattle at the market rate, and sells its product in competition with the great packers of the West. It is already supplying many of the butchers of southwest Texas, although it has been in operation less than two years.

There are six cotton gins upon the property and one cotton oil mill, and these are all under the able management of a Mr. Roberts, who buys the cotton and the seed from the farmers at the current market rates and sells them precisely as if he were independently in business on his own account.

The stores conducted by the company at Taft, Gregory, and elsewhere, endeavor to buy as cheaply and sell as fairly as an independent merchant might, and if they fail to show a profit, an abler merchant is found as superintendent of the mercantile business.

The same thing is true of the hotel which the company owns and manages.

The power plows that clear and cultivate the prairie are under the independent control of an able superintendent, whose salary depends partly upon his ability to reduce the per-acre cost of clearing and cultivating the land. These plows are moved over great areas with a rapidity that is remarkable, especially when it is considered that they are accompanied by a camp consisting of four comparatively large and substantial houses, occupied respectively as a machine shop, a bunk house, a kitchen, and an office. These houses have been constructed on what may be described as heavy sled runners, and, being attached to the engines which pull the plow, are skidded across the prairie at the rate of two miles an hour.

Machine and blacksmith shops are maintained at various points on the property, but those who have work to do there have to pay for it in cash.

There are two banks on the property, one called the Taft Bank, at Taft; and the other the Taft Ranch Bank, at Gregory — the managers of which have always to be very sure that their balances are on the right side.

As an object lesson in agricultural organization, this plan of division into separate and independent units, each one administered with due regard to the rights of its associate units, is unequalled.

ASSETS IN MONEY AND HAPPINESS

One of the best things about the community life on the Taft Ranch is that all the people, though working hard, appear to be contented and hopeful. The schools on the place provide not only for "book learning" but for agricultural education as well. To each of them is attached extensive gardens and there every child has a little plot of ground, where he may observe the mysteries of nature's chemistry.

No allusion has been made to the profit which the enterprise yields. It ought to be and undoubtedly is large. The land, which originally cost little or nothing, is probably worth at least $50 an acre. The improved land is easily salable for $75 an acre, and the unbroken prairie for $40 an acre. An average of $50 an acre for the entire tract would indicate a present valuation of something more than $5,000,000 for what, forty years ago, was almost

valueless. This does not take into consideration the improvements or the value of the building lots in the towns, nor does it allow for the profit from the various departmental units of the business, nearly all of which yield satisfactory returns.

It is not, however, with the gain that may be measured in money that this article has attempted to deal. It is of course essential that all such enterprises should be profitable. Unprofitably conducted they cannot exist. Whatever profit the Taft Ranch may yield to its owners is unimportant when compared with the enormous value of the lesson that it is teaching to the farmers of the Southwest, which it will teach to the American agricultural world, as the story of its development shall become better known.

The Taft Ranch is daily demonstrating that, in the hands of competent executives, agricultural development and enterprise are legitimate subjects of capitalistic exploitation on a large scale. If the captains of industry and finance, who have done so much for American progress in other directions, will study and emulate the success of the Taft Ranch and its management, they may do much to make our national life healthier and happier.

THE BATTLE LINE OF LABOR

III

THE PRICE OF TURMOIL

WHAT THE UNIONS PAY, IN MONEY AND IN SUFFERING, FOR "THE RIGHT TO STRIKE" AND WHAT EMPLOYERS PAY, IN LOST PROFITS, FOR "THE RIGHT TO RUN OUR OWN BUSINESS IN OUR OWN WAY"—THE COST TO THE PUBLIC

BY

SAMUEL P. ORTH

AUTHOR'S NOTE.— *A number of the men interviewed while I was gathering material for these articles do not desire to have their names disclosed for divers reasons. It has been necessary, therefore, in a few instances to resort to the less satisfactory method of giving the facts without naming the authority. If any reader, however, is curious about the authenticity of my sources, I can privately furnish the references in most cases.*

"ENGLAND is in hell," wrote the late William T. Stead in one of his last contributions to American journalism, during the coal strike last spring. He was thinking of the misery of the strikers' families and of the suffering of the hundreds of thousands out of employment.

A general strike in one important industry, like a coal strike or a railroad strike, produces a hundred thousand tragedies; not merely inconvenience, but suffering and incalculable bitterness of heart.

Of course, it is the *personal inconvenience* to the public which arouses them out of their industrial lethargy and sets them to thinking. We have formed habits of life, based on certain public conveniences, which soon become necessities. Any one who has lived through a street car strike, or a telephone or telegraph strike, realizes this. But the public has rarely been in the "hell" which Stead described. And it forgets all about it, after the wheels are turning again and the odor of brimstone has passed away. It will probably take prolonged actual suffering on our part to rouse us into some action that will lessen the tortures of these industrial hells. We, the public, are selfish, narrow, petulant, and ingenuous. When I told Mr. Harry C. Hunter, counsel for the New York Metal Trades Association, who has observed industrial conditions for years and has had a wide personal experience with the partisans and the public, that I was looking at the

problem from the public's position, he laughed, and said: "I can tell you that in one sentence. To-morrow morning, if your ice isn't delivered promptly, you will call up the ice man's office and want to know what in the dickens is the matter with everybody."

It's time the public were counting the costs of this perpetual muddle. By the laws of group psychology and the rules of economics everybody pays the penalty of anybody's folly and suffering.

Businesslike, as we suppose, we always begin to count the cost with the dollar sign. The United States Commissioner of Labor computes the direct loss in wages, from 1881 to 1900, at $306,683,223; the amount paid in strike benefits, $19,626,254; the estimated loss to employers, $142,659,104; a total of $468,968,581. Bear in mind that this is visible money loss.

The item "strike benefits" merits special attention. It is the money saved by union members for the especial purpose of fighting. From 1899 to 1902 the iron molders took part in more than one hundred conflicts in which $325,000 were paid in strike benefits. From 1900 to 1904, the cigarmakers paid more than $380,000; from 1902 to 1904, the carpenters and joiners, $188,000; and so on through the list. Last year the American Federation of Labor reported 1,359 strikes, *involving directly 170,526 members and drawing nearly five million dollars out of the "defense fund."* Neither the direct loss in wages, nor the number of non-union men thrown out of work by these strikes, is given.

Now, the money that the unions put into this fight, either as "strike benefits" or as loss in wages, is not pin money, nor can it be charged to profit and loss at the end of the year, nor to advertising. It is bread and butter money.

Some union statisticians belittle the amount by spreading it over the 3,000,000 members. For instance, in 1890, 314,000 men struck and directly involved 1,500,000 persons. The loss of wages was only $1.80 per year for the 1,500,000. But it was more than $80. for some of the strikers. And any amount of spreading will not relieve the housewife of the individual striker from the terrible rigors of economy that a strike imposes upon her. I have never learned that the 3,000,000 offered to club together to help her, individually, out of the financial straits that a loss of $50 or $100 in one lump imposes upon her.

There are hardships to labor that no dollar sign can reveal. Take the Fall River strike of 1904, when 26,000 operatives refused a 12½ per cent. reduction in wages. They braved it out for six months. Loss in wages, about five and one quarter millions; the capital invested, $25,000,000, loses income for half a year. But figures show only the fringe of the loss. "How did the folks manage to live through six months?" I asked the local leader of the spinners. "I don't know how they did it. We all turned to doing what odd jobs we could find — picking berries, working in gardens, etc. But there was great suffering, and no doubt many children will always bear the marks of that strike. The women were the greatest sufferers."

It's a rare price our culture asks for the quality of heroism. The women and children are always the greatest sufferers when men fight over their differences.

Toward the end of this strike, 3,000 people were fed daily by the city and the Salvation Army. The town suffered. The savings banks ran dry. The butcher, the grocer, the dry goods merchant, were compelled to give credit until bankruptcy stared them in the face; and it was estimated that 18,000 people left the town during this period to find work elsewhere.

A man who kept a grocery store in New Bedford and who had himself been a loomfixer, told me: "It's no joke keeping shop during strike; when women and children come in and beg with tears in their eyes for a loaf of bread and some tea to keep them from actually starving. People who haven't lived through it, and been right in the midst of it, can't realize the real hardship that such a time brings to everyone."

And when such a strike is ended, the laborer's family must economize a year, or longer, to make up the deficit and to redeem their furniture and few valuables from pawn. The shop keeper must share in this economy.

If the strike is long continued, wide-

spread, and in one of the basic industries, its dire effects are visited on many communities. When coal doubled and trebled in price, during the anthracite strike, the manufacturer could not ship goods, and the retailer cancelled orders. I was in New York City during the Pullman strike and saw the price of meat go up until it was beyond the reach of most wage earners.

Every strike, no matter how small, has its tragedies, of which the world never hears.

The money loss to business cannot be calculated. The sensitive, highly complex organization of modern business fears nothing so much as interruptions, shocks, sudden exigencies. Loss in orders, in the confusion of the markets, in idle capital, are a few of the items that swell the total. Ask any manufacturer who has had an extended strike experience, and he will figure, at once, the direct loss — what he paid detectives, commissaries, etc. — then he will add: "But the loss to business I cannot estimate. It is large." Sometimes a concern is obliged to begin all over again, in its efforts to restore itself to the confidence of the trade.

Then there is the loss of life and limb, which is always conspicuously displayed in the papers. One estimate places the loss, from January 1902 to July 1904, as follows: 180 lives lost, 1,651 wounded, 5,533 arrested. Here, too, only estimates can be made. No doubt a great many deaths occur, directly due to strikes, which never find their way into the statistician's tables; and many an assault is made under the cloak of night, in back alleys, which the morning never reveals.

The strike is the great demoralizer: it undermines the social standards of a community, it hardens the employer, it embitters the workman. The reflex results are infinitely more invidious than the direct, the visible, results.

Here is an experience told by the manager of an important concern in the East:

"Some years ago we had a strike. I used to get some of the most heartrending letters from the wives of the strikers. How some of the men lived through it I don't know. I believe some actually died from want, and some are still showing the effects of the ordeal. We simply had to fight it out on principle. It was hard on both of us. It cost us directly $65,000 in strike-breaking expenses. The men lost $160,000 in wages. Our loss in orders and interrupted business is beyond exact estimation. But the loss in the spirit of loyalty and devotion of the men to their work is the greatest. We had selected our force carefully; had taken, we thought, excellent care of the men; and had tried to be fair in every way. We did not refuse to talk over their grievances. But by and by the union demands became so onerous that we felt we could not accede. *We insist on managing our own business;* and this is practically the point that had to be fought out. Our whole shop was disorganized, our force demoralized, and it has taken a long time to get the organization back to its former efficiency."

This recital will fit a great many cases. Mr. Volney Foster, a gentleman of wide experience in these matters, said to the Congressional Committee in 1904, "The conflict always involves the arousing of malice, hatred, and murderous intent."

There is the malice toward the strike breaker. A laborer described his experience to me: "I've been through this sort of thing and I know what I am talking about. When you stand there, by the mill, with your friends around you — maybe you are hungry, anyhow you are sore — and see strangers walk through the gate, and you know that one of them is going to stand by your machine, use your tools, and get your pay, why, your fist just naturally doubles up, and your hand takes to a paving brick or anything that's handy just as natural as though it were taught. And when you think of your kids and the wife suffering for food, why, you don't care anything about policemen, law and order, and that sort of thing. Your feeling gets the upper hand, and you cut loose."

Sometimes I have mentioned this experience to employers and they say: "Why in the world don't the fellows think of their wives and children before they strike?" That doesn't meet the situation at all. The men are in possession of a spirit, a strike spirit, a passion, a psychic power that has probably been nursed and nurtured for months. "Before our last strike, the men

had worn on their coats, for a year, little tickets with 'Eight Hours' printed on them. They were all worked up to a pitch," is the way a Pennsylvania manufacturer put it to me. Mr. George W. Perkins, president of the Cigar Makers' Union, a careful, thoughtful, conservative leader, anticipated my questions. "You are going to ask me about violence. There often is violence. I do not wish to defend it. *But it arises out of the spirit of the contest.* The men feel injured, they think of their families, see strangers taking their places. *It is too late, when the strike is on, to say that some one, on one or the other side, or maybe both sides, has exceeded the limits of justice. When the war is on, passion, for the time being, rules some of the combatants.*"

This passion and malice is often no less bitter toward the employer than toward the strike-breaker. Many employers have carried revolvers during the days of the strike. Employers' houses have been assailed; and, during a street car strike, I have known of cars dynamited in front of the house of the president of the company. In exceptional instances, employers have been assaulted. Here is the experience of one manufacturer whose men struck, twelve years ago: "One day, when I was entering my shops, the strikers were around the door. One of them called me an insulting name. I retorted and, the first thing I knew, I was on the floor, and more than twenty men attacked me, kicked me when I was down. Somehow I managed to get up and crawl through the door. I was pretty well used up, and not in the mildest frame of mind, found a brass rod about two feet long, came back and hit right and left. I got eight of them; I think one man's neck is still stiff from my efforts at self-defense. We were in no conciliatory mood. I am free to say that I have been very much opposed to unions ever since, because I feel they were the cause of my men striking."

The feeling of resentment of employers toward the strikers is not softer. Somehow, an employer feels that his men *owe him loyalty.* There are shops, notably in the East, where men have worked twenty or thirty years, have started their sons as apprentices in their craft, and have seen the sons of their first employers take over the business. To such employers, the striking of such employees is the unpardonable sin. Often such men are never taken back.

There is a swift undercurrent, not only of distrust but actual fear. I have been told in confidence the inner personal experiences of many laborers and many employers. These men have requested me to refrain from making any direct public allusions to them — some, no doubt, because they have a natural aversion to publicity. On the other hand, there are many who fear the result of a public expression of their experiences and opinions. For instance, one manufacturer, a fine old gentleman of unique ability, told me that he actually feared the dynamiting of his house if his bitter experience with the unions were made public. Another employer wrote me that he would be willing to give his experiences to "reputable employers," but that he feared the retaliation of the unions if general publicity were given his story. On the other hand, union men have told me that they would surely lose their jobs if their complaint against the tyranny of their employers were made known. The spirit of retaliation, a spirit as ancient as the race, the leading motive of savage hordes, is the destructive subterranean force that is at work under the fair surface of our industrialism.

There are scores of shops in which the spirit of suspicion prevails. Many companies now employ detectives to ferret around among their men, spying out the "undesirables," even attending union meetings and reporting the doings and sayings of the individuals, so that the union nihilists may be sent to the Siberia of the "black list." The reader may imagine the feeling that prevails in such Russianized shops. Many of these establishments, run on this basis of unilateral self-righteousness, are prosperous to-day. They pay the highest wages, select their men with great care, and let them know that they will not "tolerate any dictation." But how long this kind of forced prosperity will last, no one can tell. Because the men, who know that a still hunt for rebels is constantly going on among them, are under a

constant strain. It may be unconscious, but the strain is there. And it is sure to have its hour of hysteria. A business may be built up on the spy system, but it must be maintained by the severest, most autocratic discipline.

And discipline is a tender point with both sides. "Obedience is a forgotten accomplishment" an old-fashioned man told me, who was brought up before the War as an apprentice and was for many years the manager of a steel plant. At the same time, there is nothing in this wage war to inspire the participants with the wish to be obedient.

Many strikes are colossal schools of lawlessness, in which women and children share, with strikers and sympathizers, in that disregard for authority which is our national sin. At such times breaks forth that natural resentment of those who feel themselves oppressed, treated unfairly by that vague Something which has no tangible form but is felt in many ways to be a reality, the Condition of Things, the State of Affairs, that has permitted stock watering, rebate taking, and a host of other unholy practices to take place at the expense of the humble. This resentment is a very real thing. And when the psychic conditions unite with outward circumstances to give it opportunity for expression, a whole community is seized with the frenzy of disobedience.

In the house of the toiler and in the house of the employer, on the streets and in the factory, in the hearts of men and in the souls of children, the spirit of strife is reaping the harvest of Hell.

The thousands of strikes, the myriads of unrecorded threats, the grumblings of the workers, the complaints of the masters, the angry glances, the ill-will locked in the heart that never reveals itself even to the eye — these are the tokens of the evil spirit of the wage war.

Their open manifestations are even now breaking through the crusts of national habit and social convention. To what other source shall we trace the sullen unrest that to-day possesses our people? The envy, malice, class hatred; the mad dash for extravagance; the wicked rivalry that extracts gold where none is due; the universal over-reaching? It is a terrible price we are paying for the "right to run our own business as we please" and the "right to strike whenever we please."

In yet another way this spirit of contention manifests itself. The employer claims that unions restrict the output; the employee retorts that the boss, by his efficiency tests, his "speeding up," would soon drive the men into nervous ruin.

Do the unions restrict output? Since the Government report on that subject, in 1894, they do not so openly advocate the limitation of a day's work. As nearly as one can get at the facts, they do have an effect on lessening the output. Mr. B. A. Larger, secretary of the United Garment Workers of America, said:

"I can say that our unions do not limit output. A great deal of our work is paid for by the piece. However, in all branches some employees work by the week. I have known a few cutters who have become physical wrecks from over-exertion in trying to outdo their fellow cutters. As a rule, union men are satisfied with a fair day's wage for a fair day's work."

Henry Abrahams, secretary of the Cigar Makers' Union of Boston, a quaint and philosophical person, to whom I was referred by a dozen men as one of the best informed union men in Boston, said: "Why should men work as hard as they can for any one or for Society? We are on the piece-work system and are paid for what we accomplish. When we earn a fair wage we are satisfied, and Society and the boss ought to be. I can't blame the men for limiting the output above this reasonable amount, because I fail to see why a man should work harder than he believes is reasonable. I believe in a fair day's work for a fair day's wage. But I do not want a man to work till he is physically exhausted. After all, the wage a man earns determines where and how he shall live and how long his children shall be at school, and how they shall be clad."

The unions feel that in the face of the rising cost of living, the constant introduction of new labor-saving machinery, the use of efficiency methods like the Taylor system, the workman is compelled, more

and more, to exert himself, and that he is justified in limiting his efforts. Especially does the introduction of machinery affect the productivity of labor. And in spite of their protests of neutrality, the workmen find it difficult to treat the new machine as a welcome addition to their shop. President Valentine, of the International Molders' Union, a craft that has had a good deal of experience with the new molding machines, told me:

"We are not opposed to machinery. We know it will come in anyhow, whether we are opposed to it or not. That is inevitable. But we are opposed to being treated as machines and to being measured by machine standards. We have formed a new class of men of those who work on molding machines and admit them to our union."

Isn't it a deal to expect of a man to enthuse over a machine which he sees replace a number of his fellows and do the work of a score or two of men? Yet I have had employers complain to me that their machines often got bad treatment and in some instances didn't even work for some reason or other!

I have not found a single employer, in my own investigations, who did not think that unions, whether consciously or unconsciously, limited the output. I do not say that there are no such employers. I only happened not to find them. And this includes employers who are running union shops and are in collective agreement with their men.

Mr. George T. Kieth, shoe manufacturer of Brockton, Mass., in whose factory the wage agreement is established, wrote to the Massachusetts commission on the cost of living: "There is no doubt that the average workman does not produce quite as much as he formerly did; that is, without any question, labor is restricted to a certain point. . . . I have often been told by my workmen that if they had the opportunity to do just what they pleased they would be glad to do more."

A cotton manufacturer of Fall River, whose mills have an agreement with the unions, says:

"Our experience is that unions tend to reduce output per capita."

Foundries and machine shops were specific in their complaints on this line. In one Eastern shop I was told that in their foundry they were making large cast-iron pulley wheels. The men were making two a day. A test was made and it was found that four could easily be made. But the man who made the test came to his foreman after a few days and said he would have to quit working so fast. The union had fined him $50.

The superintendent of Bliss & Co., Brooklyn, told me that their foundry averaged 1,000 pounds a day per man before the union came in. It was gradually reduced to 500, when the company refused any more concessions, and the fight came. "It is now 1,800 pounds a day and the men make more money than in any foundry we know of, and the work never was better," writes the manager. This is now an open shop, after a bitter strike experience two years ago.

Several stove manufacturers who have agreements with the molders' union and with the polishers told me that, in spite of these agreements, the unions did somehow curtail output.

Some unions have defined a day's work. The lathers of Chicago at one time called twenty-five bundles the limit of a day's toil, and the Chicago carpenters resolved that "any member *guilty* of excessive work or rushing on any job shall be reported and be subject to a fine of $5." The bricklayers of Boston forbade practices that would "jeopardize the interests of a fellow member," like "putting the lime on more than one course at a time." Plumbers must not ride bicycles to or from their jobs.

Let us not be deceived. Love for unlimited output has never characterized the employer when prices were in jeopardy. For instance, I know of a fish company that was prosecuted for allowing great quantities of fish to spoil, in order to keep up the price, while poor people in the cities were crying for cheaper food. And what is the object of "trusts" and pools and monopolies?

In this wage contest, the two parties are looking at the problem from opposite sides; the employer looks at it as a producer, the employee looks at it not so much as a workman but rather as a human being,

a man with appetites and feelings. The one, for a wage, wants to dominate the productive capacity of the other: the other, in spite of the wage, claims the right to domineer his own energy.

The question arises: What does a man owe the company for his wage? As nearly as I can learn, most employers seem to think that the men owe them loyalty, a sort of self-surrender for the wage they get. They feel that they are giving the men more than a chance to work; that they are giving them a living. On the other hand, the wage worker is getting to look more and more upon his relation to the employer as a business relation pure and simple. He is not selling his heart, his devotion, his ambition. He is only bartering his presence and a certain amount of effort for a stipulated wage.

And the public? I have heard business men of large experience and good intellects advocate paying labor all the wages the men could possibly ask, and then raise the price of their goods in order to get the money wherewith to pay the advanced wages. Of course, wages, like everything else, come out of the universal jackpot, and we are all in the game. The Massachusetts State Commission on the Cost of Living in 1910 said that "trades unions cannot be regarded as a factor of any considerable importance in the upward price movement of recent years." The public knows, however, that prices have gone up, in some instances, more than 50 per cent. — and that wages have risen 22.5 per cent. since 1890, and that employers don't seem to be foregoing their automobiles and their trips to Europe.

VIOLENCE AGAINST VIOLENCE IN THE LABOR WAR

POLICEMEN'S CLUBS AGAINST HOODLUMS' COBBLESTONES, A COMMON EXPRESSION OF THE PASSIONS THAT ARE LET LOOSE BY STRIKES

Of course the public, under the present system of push and pull, is not considered at all. Why should they be? What have they ever done toward bringing on the

dawn of a better economic day? The public are not even umpiring this national jugglery in which capital and labor conspire to get what they can, without being too conscientious about what they give.

There is one other item in the price we are paying for the privilege of letting labor and capital fight their battles while we stand by with our hands in our pockets.

What of the workman of to-morrow?

The unions limit apprenticeship? Yes, in some trades, notably the building, metal, and printing trades, and in glass blowing In a few trades, where only a limited number can find employment, the restrictions are almost prohibitive, on the plainly announced grounds that it would be suicide to overstock the market with trained men.

America has never made a serious attempt, as a nation, to solve the problem of training its youth into industrial efficiency. We have pursued the usual policy of letting the two sides get into each other's hair over wages and hours, while boys were growing up, untaught and untrained, into a status that is no better than slavery, namely, unskilled workmen, touched — I had almost said tainted — with just enough ambition to want to be something more, but lacking the requisite encouragement, in their younger days, to start them right. Here and there an enlightened policy has led a few shops to perfect splendid apprentice schools, like the General Electric Company, at Schenectady; occasionally private munificence has established a really practical trade school, like the New York Trade School; and the continuation school has been adopted, in a modified form, in Cincinnati; while our public schools have for some time been teaching "manual training," where Johnny learns to make a rolling-pin and tie a blue ribbon on it.

"SCAB! SCAB! SCAB!"

THE HIDEOUS EPITHET BY WHICH STRIKERS DEFINE THE MEN WHO TAKE THEIR JOBS, AND THE MOST EFFECTIVE WEAPON THEY USE. "I HAVE SEEN EXPERIENCED STRIKE-BREAKERS SHRINK FROM THE WORD AS FROM A BLOW"

Two years ago the American Federation of Labor published a report on industrial education. It backed a bill in Congress for establishing some sort of coöperation between Federal and state governments for the purpose of giving instruction in "agriculture, trades, and industries, and home economics *in secondary schools.*" The report it issued states: "Organized labor's position regarding the injustices of narrow and prescribed training in selected

POLICEMEN STORMING A STRIKERS' STRONGHOLD

RETURNING PISTOL SHOTS FOR BRICKBATS FROM THE WORKMEN WHO WERE ENTRENCHED IN THE BUILDING

trades, by both private and public instruction, and the flooding of the labor market with half-trained mechanics for the purpose of exploitation, is perfectly tenable."

This quotation hints at the point of friction. The employer, as a rule, wants a youth to become a practical workman as soon as possible. That means a short cut.

PENNSYLVANIA MOUNTED POLICEMEN DISPERSING A GROUP OF STRIKERS

THE REPLY OF THE PEACE OFFICERS TO THE THREATS AND TAUNTS OF WORKINGMEN

ATTACKING A STRIKE-BREAKER IN THE TAXICAB STRIKE

IN NEW YORK LAST YEAR. A METHOD OF "PERSUASION" THAT IS OFTEN USED BY STRIKERS TO PREVENT OTHER MEN TAKING THEIR JOBS

I have been in some shops that give a splendid four years' training. But, on the other hand, there are many employers who take a boy and at the earliest feasible time put him to learning a machine, a lathe, or a drill press, without caring the snap of a finger for his all-around training. This has been freely admitted to me, and some of our great machine shops have recently modified their apprentice system to this hurry-up plan.

On the other hand, the labor unions have their gaze fixed on the labor market, and go to the other extreme. They would not only avoid the "half-trained" apprentice, but would actually limit the number of the well-trained. So they rejoice in what the state will do for secondary schools, but are not enthusiastic for any trade education in the grammar schools.

The public's interest lies in the middle ground: that efficient industrial training shall be denied to none; and that superficial short cuts be abolished.

All this has a bearing on what the older employers called "the vanishing of the craftsman." A majority of the employers with whom I have talked complained that mechanics do not possess the pride in their skill they used to. They say, "Wages, only wages, and hours, occupy their time."

Labor denies this. It points to the machine and asks, "How am I to compete with that?" It points to the American products shipped to all the markets of the world: the American automobile, the American shoe, the American sewing machine, and so on, as evidences of workmanship. And finally it says that the employer is comparing the skill of the all-around mechanic of thirty years ago with the machine driver of to-day.

For thoroughness, European countries have us completely distanced. The hurry-hurry methods of America are deadly to efficiency and thoroughness. The tussle for the world's markets has only begun. Keep your eyes on Germany. Even northern Italy is experiencing a wonderful industrial

awakening. When the genuine test comes, workmanship, durability, will tell the story.

Whatever exaggerations the egoism of the contestants in this war may impel them to make in self defense, the truth remains that Americans glorify speed more than quality. And we, the people, all of us, wage-earners and wage-givers, and the flacculent public, are going to suffer from it. I have failed to find that labor unions are very enthusiastic about craftsmanship. They have few, if any, classes for teaching skill; their trade journals only give casual attention to instruction. I have looked through a great many of them. Occasionally you see an article on the technique of their craft. But the most of the pages are filled with union news. As I said in the first article, the unions are fighting-bodies, not craft guilds.

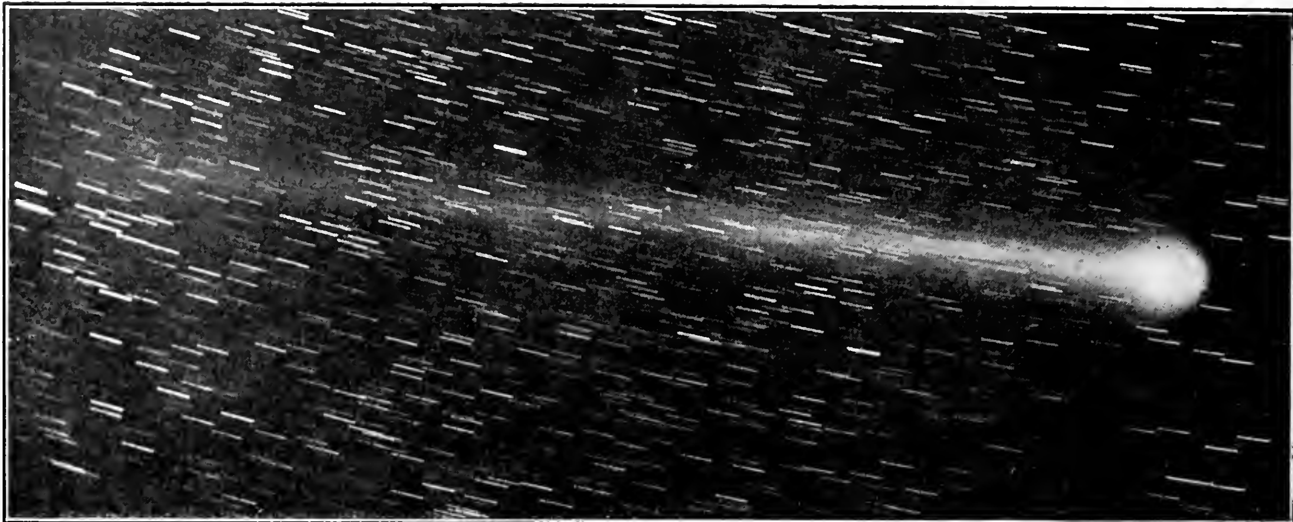
And the employers? Some complained to me that the "fine old spirit of the American workman of forty years ago had vanished." How about the fine old spirit of the employer of forty years ago?

What can men expect, when they are lined up for a fight, except fists and expletives?

Yet Germany, though in constant labor turmoil, emphasizes skill. The Government compels it through a complete system of trade and technical education; the employer demands it by coöperating with the Government; and the laborer supplies it through his skill, attained, not alone in the schools and shops, but also in his unions, which maintain classes to supplement the schools, provide libraries and lectures, and print trade journals that are filled with instructive reading matter. But these German unions, fighters that they are, have a fundamental precept: "First be a thorough workman, then demand your rights." What effect is this going to have upon the outcome of the struggle for the world's markets?

"THE BLACK MARIA" AS A WEAPON IN THE LABOR WAR

POLICEMEN AND THE PATROL WAGON PRESERVING THE PEACE AND KEEPING TRAFFIC OPEN IN A STREET-CAR STRIKE IN CLEVELAND



EXPLORING OTHER WORLDS

ADVENTURES ON THE FRONTIERS OF SCIENCE

SECOND ARTICLE

DISCOVERIES AMONG THE STARS

(CONCLUDED)

RADIATION, THE COÖRDINATE FORCE WITH GRAVITATION IN THE CONTINUOUS PROCESS OF FORMING AND DISINTEGRATING HEAVENLY BODIES—BOMBARDMENT BY METEORS THE CAUSE OF THE "CRATERS" ON THE MOON—THE NEW THEORIES OF NEBULAR AND SOLAR PHENOMENA

BY

WILLIAM BAYARD HALE

THE discovery by Sir Isaac Newton of the law of gravitation made possible the beginnings of a science of astronomy. Thenceforth it was possible not merely to catalogue the stars and observe their movements, but to frame theories regarding the operation of the world-machine. The principle of gravitation furnished a key to the behavior of the planets, moons, and comets, and threw some light on the movements of bodies beyond our solar system.

But is gravitation the only great law that is at work in the heavens — apart from the ordinary principles of chemistry and physics?

There is a fact about Newton's law which until very recently has almost escaped notice: *it ceases to act when a body grows very small.* As a body dwindles into a mere particle, the proportion of mass to surface diminishes. Gravitation acts on *masses*. *Surfaces* are acted on by another force. There is a point of size below which a body passes out of the domination of gravitation and comes under the influence of another great law.

The other law is that of radiation. Opposed to the force that tends to draw masses together is another force which we may call radial energy, and the effect of this second force is to drive particles away.

It has long been suspected that light exerts pressure. So long as men held the old corpuscular theory of light — namely, that light consisted of actual particles projected in all directions from the source of illumination — it was easy for them

THE GREAT NEBULA IN ORION

THIS GLIMPSE INTO THE STORMY ABYSS OF SPACE WHERE WORLDS ARE FORMING IN THE HEART OF CLOUDS OF STAR-DUST IS THE MOST IMPRESSIVE CORNER OF THE UNIVERSE THUS FAR DISCOVERED BY THE EXPLORERS OF THE SKY

Photographed at the Yerkes Observatory by Ritchey, with the 2-foot reflector

THE GREAT NEBULA IN ANDROMEDA

THE ANDROMEDA NEBULA OCCUPIES AN AREA IN THE SKY THOUSANDS OF TIMES GREATER THAN THAT OF OUR ENTIRE SOLAR SYSTEM, MILLIONS OF TIMES THAT OF OUR SUN. SOME ASTRONOMERS CONSIDER IT NOT A TRUE NEBULA, BUT A PRODIGIOUS ASSEMBLY OF FULLY FORMED SUNS ENORMOUSLY DISTANT, FORMING A SORT OF UNIVERSE ITSELF BEYOND OUR STARS

to think of it as a bombardment. Kepler, who three hundred years ago noticed how the tails of comets are repelled by the sun, theorized that the tails consisted of particles of the comet carried off by the light corpuscles as they hit the sides of the comet. His explanation may be a trifle crude, in the light of modern knowledge, yet he was essentially right.

Even after the wave theory of light had

Photographed at the Mt. Wilson Observatory

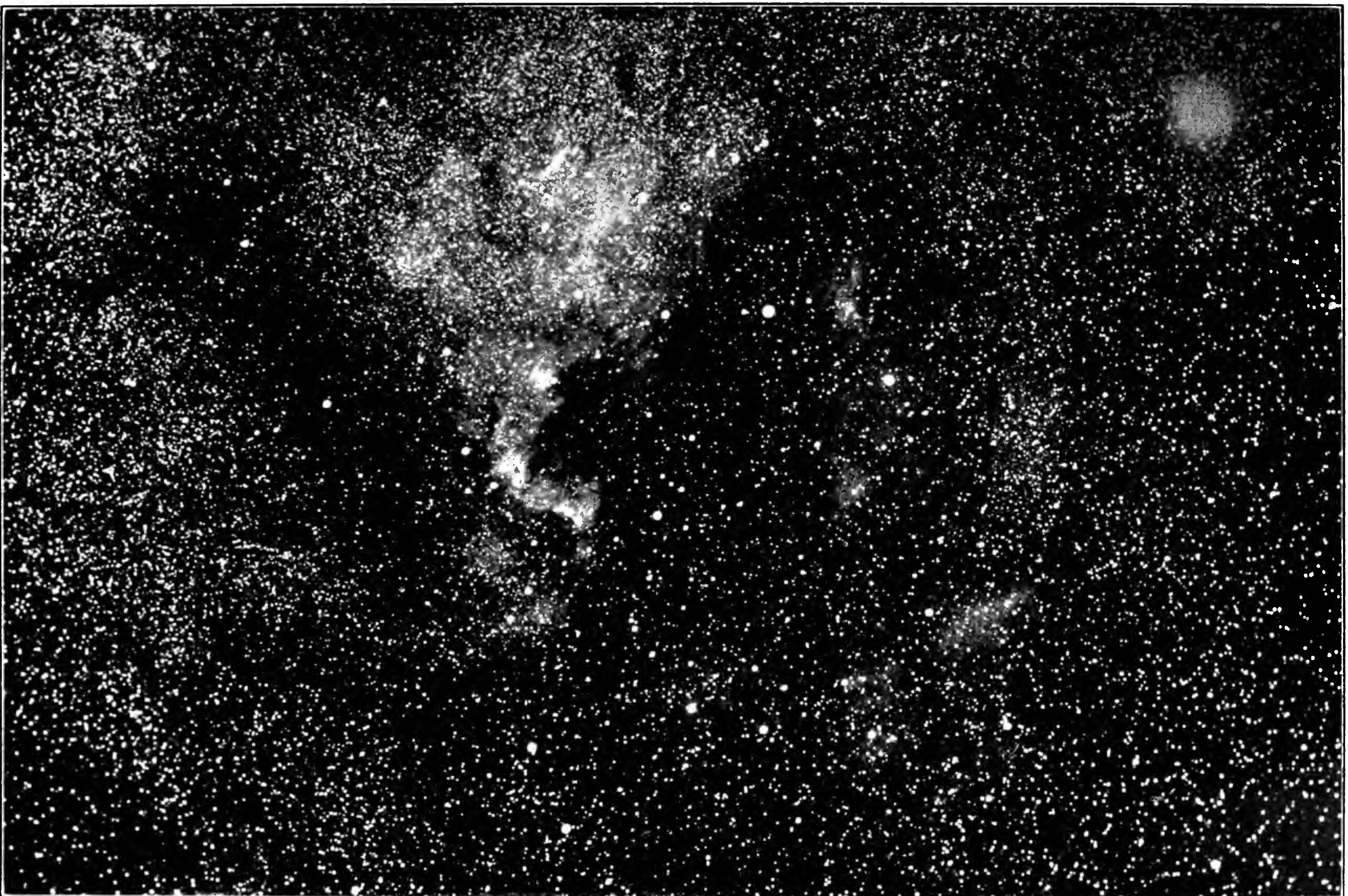
THE SPIRAL NEBULA IN THE HUNTING DOGS

THIS IS THE NEBULA WHOSE SPIRAL FORM WAS FIRST DISCOVERED IN 1845. LONG CONSIDERED UNIQUE, IT IS NOW KNOWN TO BE TYPICAL OF AN IMMENSE NUMBER OF OBJECTS WHOSE STUDY HAS GONE FAR TO BRING ABOUT A NEW ERA IN ASTRONOMY

AN UNUSUAL VIEW OF A SPIRAL NEBULA

THIS BEAUTIFUL PHOTOGRAPH SHOWS A SPIRAL NEBULA IN PROFILE. THIS VIEW MIGHT BE TAKEN FOR THAT OF A SUN WITH RINGS LIKE SATURN'S, BUT OTHER PHOTOGRAPHS REVEAL THE TRULY SPIRAL CHARACTER OF THE STAR-DUST CLOUD OUT OF WHICH THE SUN IN THE CENTRE IS EVOLVING

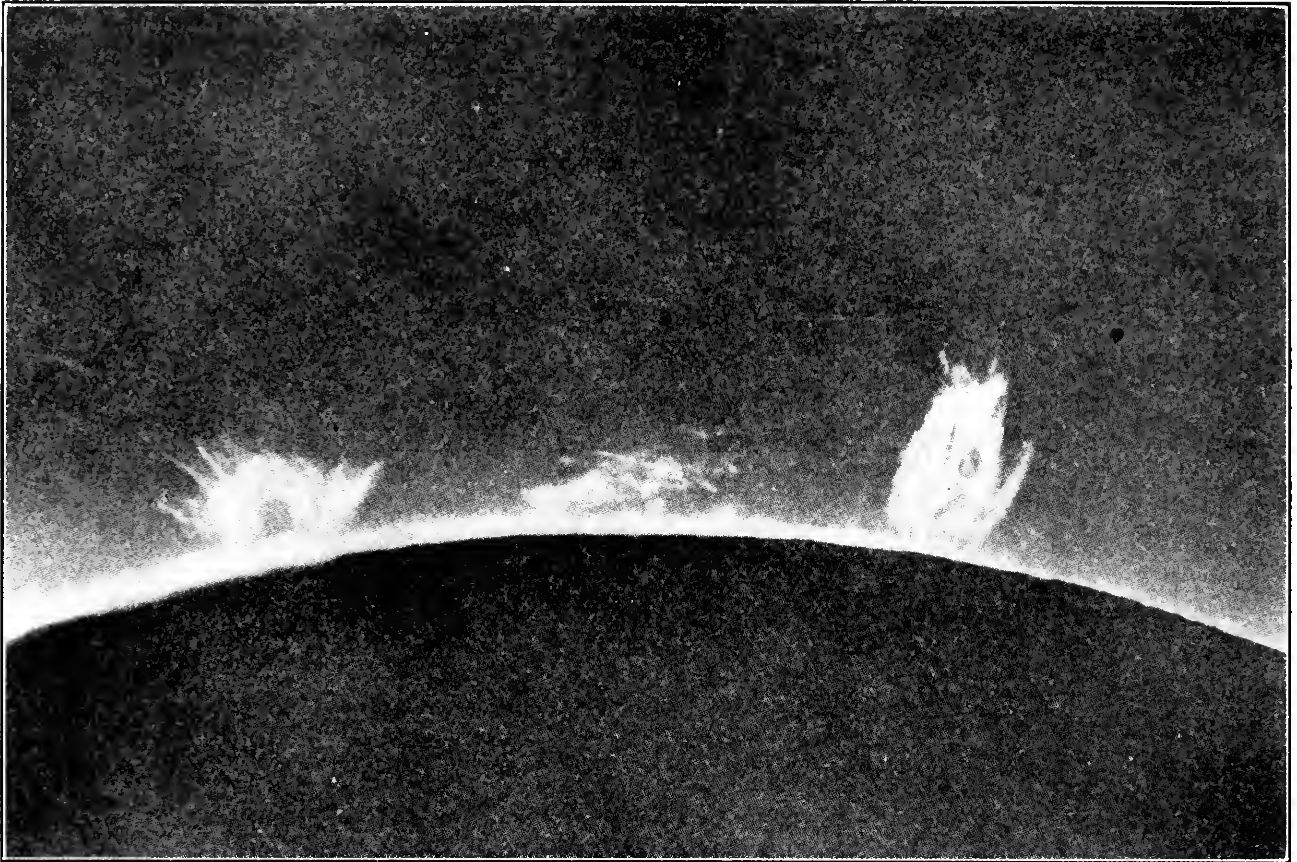
been generally adopted, there were those who continued to believe that the rays carried a sensible push — exerted pressure where they fell. Euler, away back in 1746, fought for this belief. Since his day, Maxwell, Bartoli, Lebedeff, and Arrhenius have cherished it. But it was left to two Americans, Nichols and Hull, to establish beyond all denial the practical importance of radiation pressure.



Photographed by Barnard

THE CLUSTERING OF STARS IN THE MILKY WAY

A VIEW OF THE NEBULOUS REGION NEAR ALPHA CYGNI, ILLUSTRATING T. J. J. SEE'S CAPTURE THEORY. NOTICE THE GULFS OF COMPARATIVE DARKNESS THAT SURROUND THE CENTRE WHERE THE CAPTURE PROCESS IS GOING ON



Photographed by Barnard and Ritchey, May 28, 1900

SOLAR "PROMINENCES" SEEN DURING AN ECLIPSE

THE SUN, IN THIS PHOTOGRAPH, IS COMPLETELY HIDDEN BEHIND THE MOON. THE RIM OF BRIGHTNESS IS THE CHROMOSPHERE, THE SUN'S GASEOUS ENVELOPE, AND THE PROMINENCES ARE RED FLAMES OF HYDROGEN AND HELIUM. THEY FREQUENTLY REACH A VISIBLE HEIGHT OF SEVERAL HUNDRED THOUSAND MILES, BUT INVISIBLY EXTEND TO THE FARTHEST CORNERS OF THE UNIVERSE

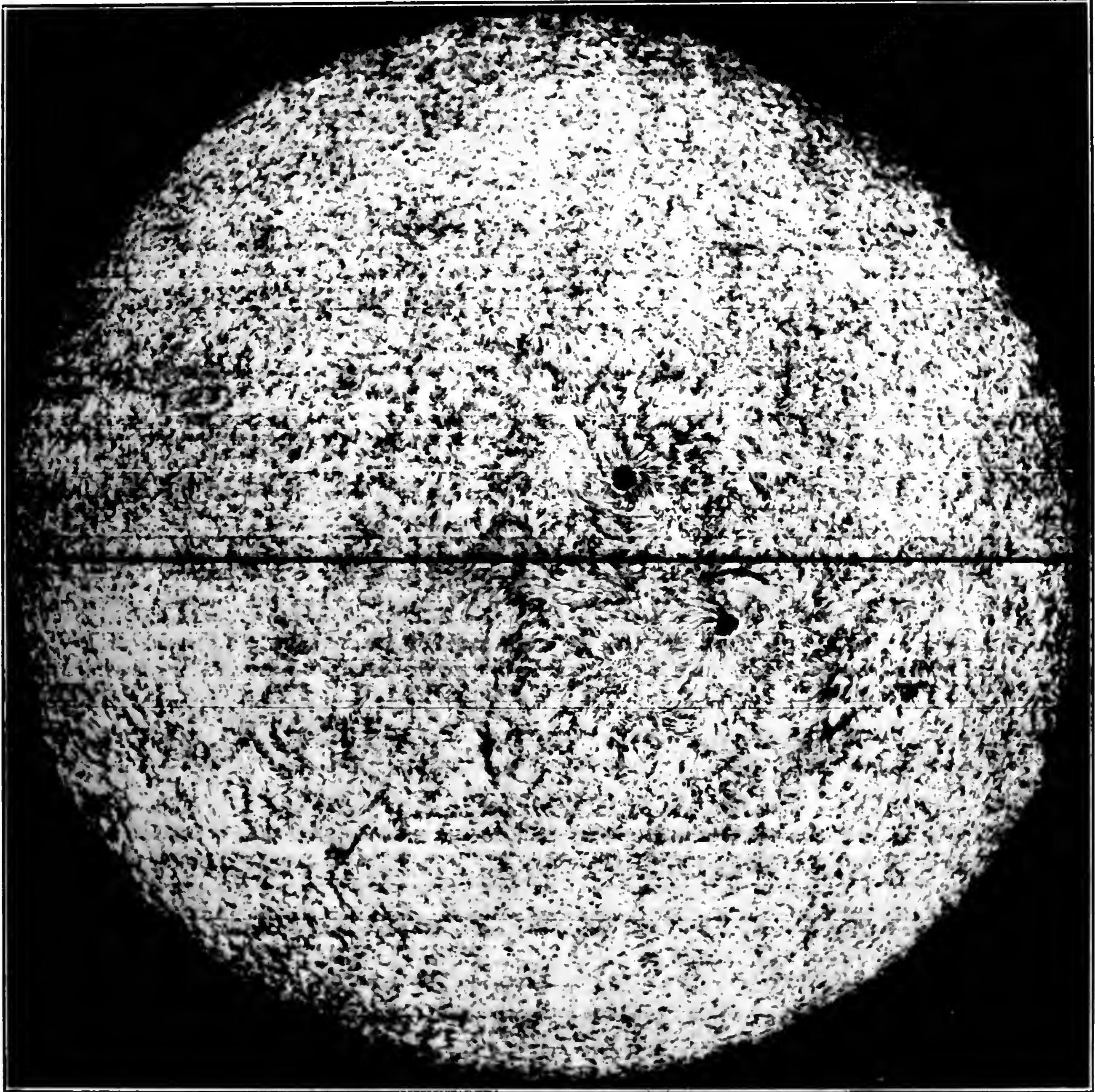
Nichols and Hull mixed puff-ball dust with emery powder, placed the mixture in the upper chamber of an hour-glass from which the air had been exhausted, and let it sift through; the grains fell perpendicularly, as sand would have fallen. Then, reversing the glass, they directed upon the falling stream the light of an arc-lamp concentrated through a lens. The emery powder fell perpendicularly as before, but the particles of puff-ball powder were driven against the side of the glass farthest from the light. Gravitation had its way with the larger masses, but the pressure of the light dominated the tinier particles of dust.

Partly for convenience and partly out of ignorance, we may talk of this radial energy as the pressure of light. Light-rays are the most easily recognized emanations, but, of course, we know that they are but a single class among many classes of rays. The study of the properties of the Crookes tube gave a widened knowledge of radiant energy, and the discovery of radium has startled the world into a realization of the immense importance of the part in the constitution of things played by radio-activity. There is no space here even to sketch in passing the revolution in all scientific thought touching the ultimate nature of matter and the laws of physical energy which in the last few years the new knowledge of radiation has wrought. It is only possible to say that whatever it has done in the field of chemistry and physics, it has done more in that of astronomy. This, then, seems not too much to say of radiation:

The great new fact in the study of the stars is that this radiation pressure is at work throughout all the universe, the second, complementing, and completing principle of the two principles one of which Newton disclosed. Just as the pull of gravitation is everywhere drawing masses together, so everywhere the push of radial energy is

driving particles away to the farthest confines of the universe.

Gravitation predominates in the case of masses: radiation in the case of minute particles. It is possible to calculate the size of the particles (corpuscles, spherules) which at a given position in the universe



"SUN-SPOTS" REVEALED AS ELECTRICAL CYCLONES

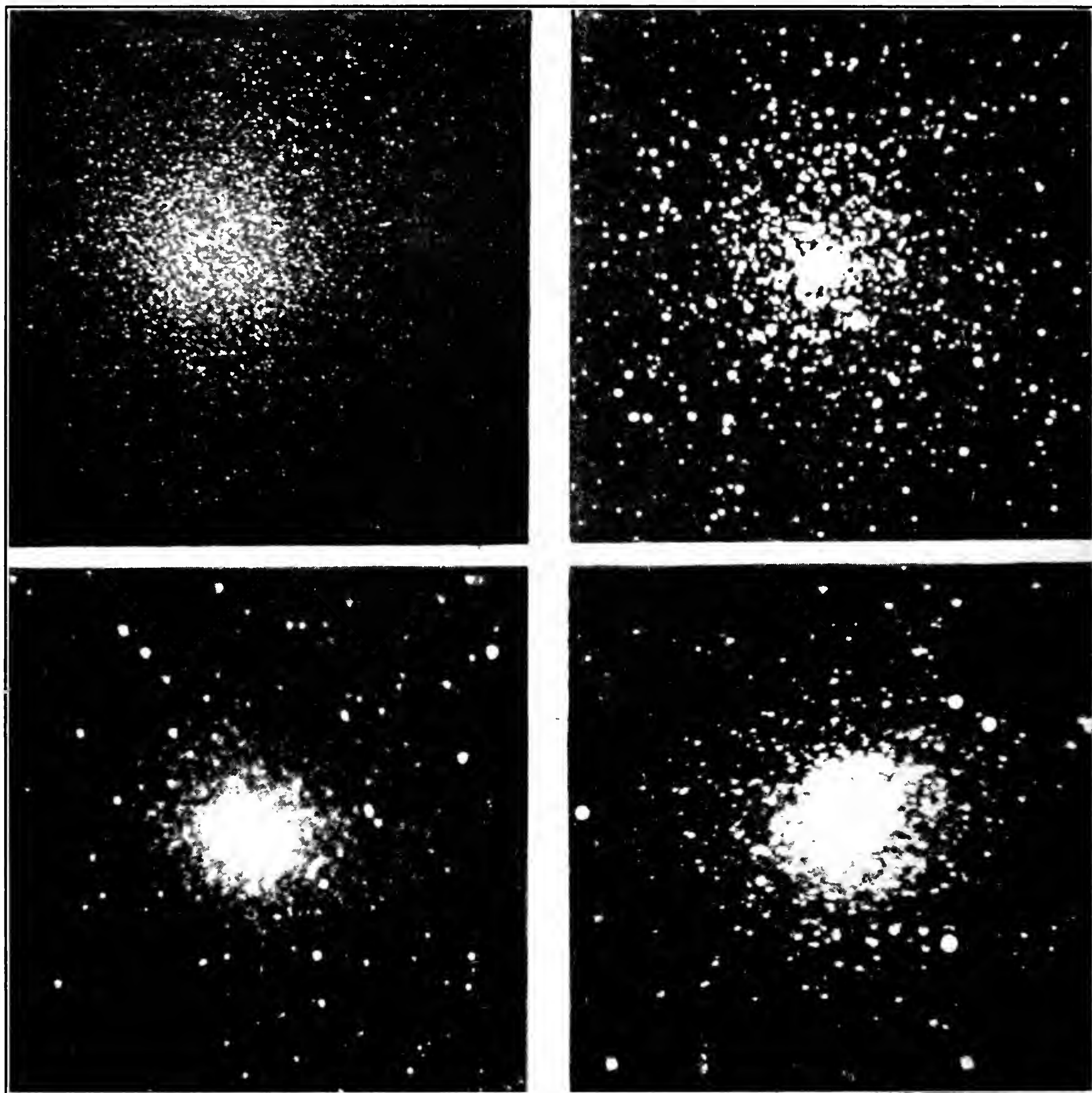
A PHOTOGRAPH OF THE CHROMOSPHERE (THE SUN'S ATMOSPHERE), MADE BY MEANS OF DR. GEORGE E. HALE'S SPECTROHELIOGRAPH AT THE SOLAR OBSERVATORY ON MT. WILSON, CAL. THIS AND SIMILAR PHOTOGRAPHS PROVE THAT THE SUN IS A VAST ELECTRICAL FURNACE

will be pulled or be driven, and many such calculations have been made within the present century. Naturally they are too technical to be more than alluded to here. It is enough to know the Big Fact — that, corresponding to gravitation, there is a second cosmic force, radiation, and out of the two the New Astronomy is evolving a consistent and comprehensive account of the processes going on in the sky.

Let us observe radiant energy at work in the heavens — for we can see it clearly. When the sun is in eclipse, so that its face is hid behind the moon, we see gigantic banners streaming away into space. They are streams of particles carried away in the sun's radiation — typical of a process which is repeated on every star. Our sun (as may be seen at any eclipse) is surrounded by a halo of corpuscles — the corona — driven from his mass by radiant

energy, and disappearing from our view only as their volume grows attenuated in dispersion. The so-called tails which comets develop as they near the sun, and which always stand away from the fiery centre, are, much as Kepler guessed, corpuscles driven away from the comet's as they are discharged, and glow with electrical excitement.

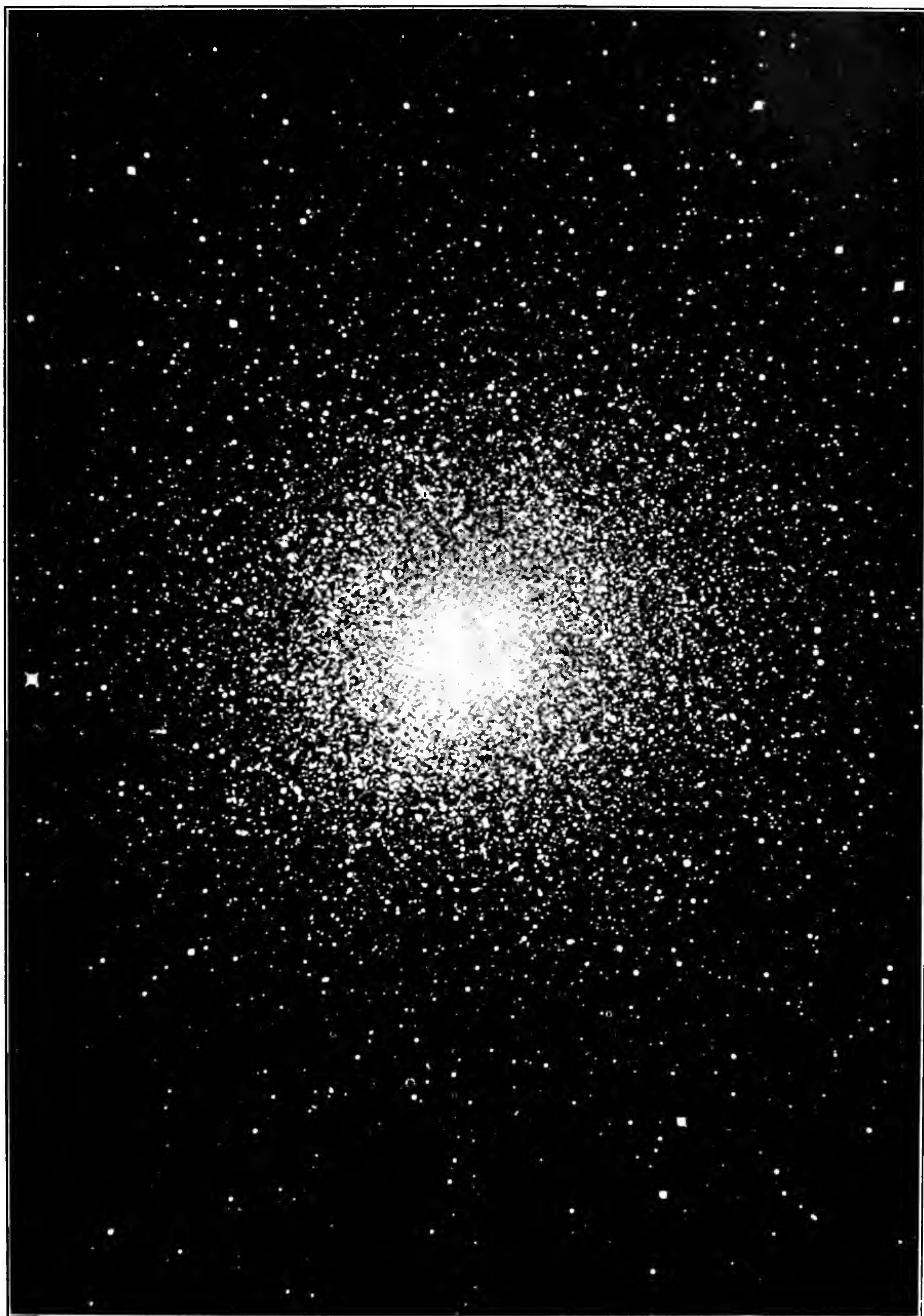
It is in this condition that star-dust, hanging suspended in our atmosphere, after journeys perhaps from our sun, perhaps from stars immensely farther away, reveals itself in the Aurora Borealis.



NATURE'S CENTRALIZING TENDENCY ILLUSTRATED IN FOUR GREAT "STAR CLUSTERS"

IN THE CONSTELLATION OF CENTAURUS (UPPER LEFT), OPHIUCHUS (LOWER LEFT), PEGASUS (UPPER RIGHT), AND AQUARIUS (LOWER RIGHT). THE HEAVENS ARE CROWDED WITH SYSTEMS LIKE THESE

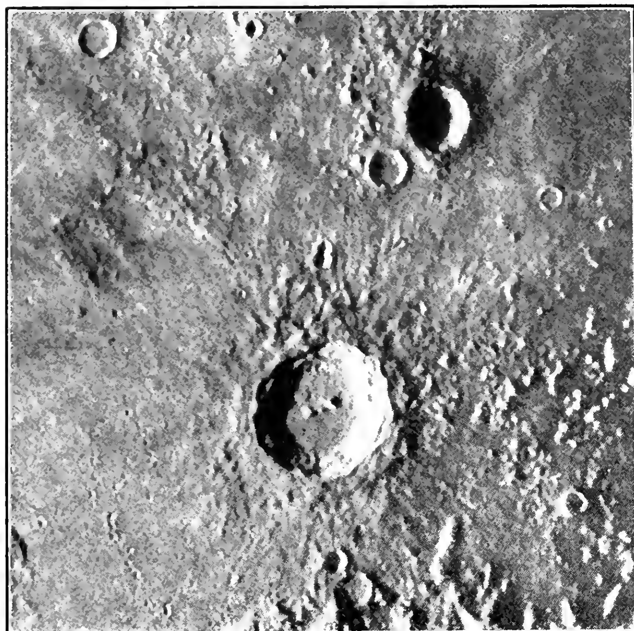
core by the radiation pressure beating upon the venturesome visitor. It is possible that the visibility of the fiery particles is due only to the illumination which falls upon them from the sun, but probably, at least in many situations, the particles are electrified, "ionized," The careful studies of the Aurora made by Arrhenius leave doubt no longer possible as to the cause of this atmospheric phenomenon. It is dust from far-off stars that causes the Zodiacal Light, seen in the tropics almost any clear evening or early morning. The ruddier glow of the

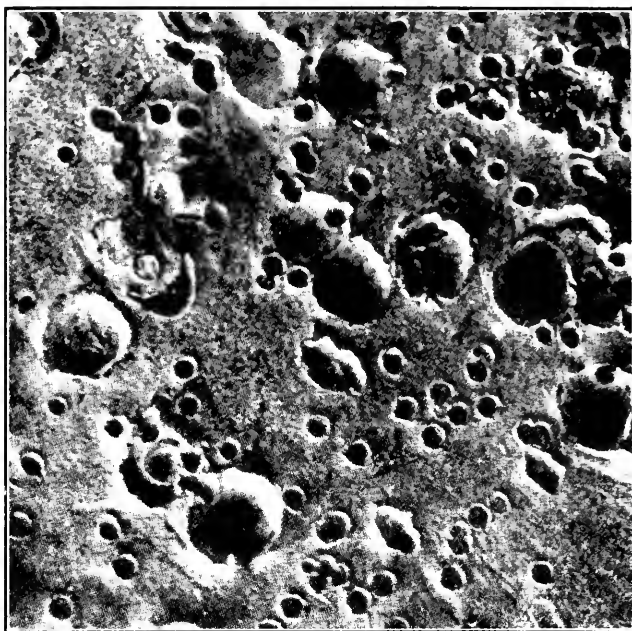


Photographed at Mt. Wilson Solar Observatory

A TYPICAL STAR CLUSTER IN HERCULES

AN ILLUSTRATION OF THE TENDENCY OF STELLAR MASSES TO COME TOGETHER UNDER THE INFLUENCE OF GRAVITATION. THE UNIVERSE WOULD EVENTUALLY COALESCE WERE IT NOT FOR THE OPPOSITE FORCE OF RADIANT ENERGY WHICH TENDS TO DISPERSE MATTER IN THE FORM OF MINUTE PARTICLES



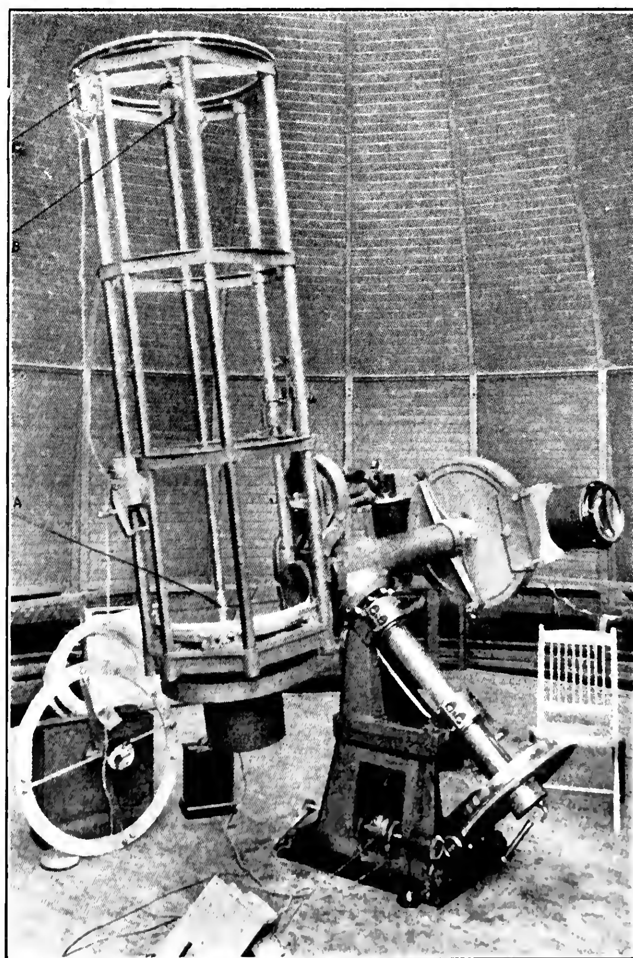


THE MOON'S CRATERS MADE BY METEORS

ONE OF THESE PICTURES IS A PHOTOGRAPH OF A SECTION OF THE FACE OF THE MOON; THE OTHER, A PHOTOGRAPH OF A SHEET OF LEAD INTO WHICH BULLETS HAVE BEEN SHOT

sun morning and evening, and the golden glory of the moon when it is near the horizon rising or setting, are in part due to the particles of cosmic dust falling on the earth. It is when the sun is low that the saturation of the atmosphere can best be detected.

After the volcanic explosion of Krakatua in 1883, and to a lesser degree after that of Mt. Pelée in 1902, unusually red sunsets and sunrises were noticed all round the globe. An immense amount of matter was, in each of these catastrophes, shot into the air, there to hang suspended for months. In the same way, much dust brought by radio-activity from the stars hangs in the upper air. The finer particles do not immediately reach the earth's surface, trickling down through the atmosphere gradually.



THE YERKES 24-INCH REFLECTOR

THE STARRY IMAGE FALLS UPON THE SPECULUM (THE CONCAVE MIRROR) AT A, AND IS REFLECTED BY THE SMALL MIRROR AT B INTO THE CAMERA ATTACHED AT C

Some of this stardust reaches us in recognizable masses — in the form of "shooting-stars" and meteors. In most cases, these brilliant apparitions are accretions of particles carried away from the stars by radiation. Floating about in space, when the impulse that swept them away is exhausted, some of these particles collide and collect. In other cases, no doubt, the meteorites have had a long life-history before they came to us; some of them are fragments of disrupted comets.

Everybody who even occasionally watches the sky knows that "shooting-stars" are extremely common; every hour sees a dozen, and at times they fill the air like snow-flakes. We are in a continuous bombardment from the stars. One calculation based on timed observations, made by H. A. Newton, reaches the conclusion that 16 million meteorites enter the earth's atmosphere every twenty-four hours. By far the most of them are so minute that they are consumed before they reach the ground, though about one thousand do that every year, some of them of considerable size. The meteorite that Peary brought down from the North weighs more than thirty-seven tons. There have probably been much larger ones.

Not far from Flagstaff, Ariz., is a remarkable crater-like depression. The rim of it, rising about 140 feet above the plain, can be seen from the railroad, passing Cañon Diablo. The depression has a diameter of about three quarters of a mile, and the bottom is 500 feet below the top of the rim, 350 feet below the surface of the plain. No one can look upon this remarkable phenomenon without thinking of the "craters" of the moon.

But there are no signs of volcanic action ever having taken place in this region; the thing is out of the question. The "rim" piled around the crater has not come from the interior of the earth, but is composed of sandstone rock, which in some way has been lifted above the plain. Some of the great masses of this sandstone have apparently been highly heated and crystallized, but most of the rock has been crushed and shattered. The whole neighborhood is sown with meteors. The local dealers have done a flourishing business in meteoric iron for years. One meteoric block weighing one thousand pounds is now exhibited in the Chicago Museum.

Of course that there are veritable craters of lunar volcanoes now extinct is still the popular belief, as it was twenty years ago the best scientific idea. No astronomer to-day believes that the rings on the moon's surface are craters in anything but name. One has only to note the effect of rain-drops on a pool of mud or of bullets shot at a disc of lead to conclude that the lunar "craters" (see page 296) were made by meteorites, at a period when for some reason the moon was being vigorously bombarded.

As for the earth to-day, it is receiving from the sun alone, Arrhenius calculates, 200 tons of radiated matter every year. But it is not from our sun alone, it is from the myriad stars that there come to us constant ejections of matter. Appelzer of Vienna has calculated that 218 million tons of cosmic dust fall daily upon the earth. The earth alone! If this calculation represents anything like the truth what prodigious, what inconceivable, quantities of star-dust exist in space!

That we on the earth feel the play upon it of streams of star-stuff, even as under certain conditions we see evidences of them, is a conclusion to which modern astronomy has come. For instance, the earth is not stable to its poles. As early as 1885 astronomers found that latitude on the earth was not fixed. Seth C. Chandler, an American, first tentatively, in 1891, and later positively, observed the latitude of Cambridge, Mass., and proved that it vacillated.

Every possible theory has been adduced to account for this astonishing fact. It has even been suggested that Gravitation is not a constant force; i.e., that its pull is weaker at times than at others. So monstrous a hypothesis cannot be entertained. It is far more reasonable to believe that the earth is meeting resistance as it moves through space; such resistance would be supplied by the streams of meteoric dust that we know falls upon it. The moon fluctuates in its movements: its motion is frequently accelerated. This also has been a great perplexity to astronomers. Streams of cosmic dust playing against it irregularly give a sufficient explanation.

Of course, the idea of vast clouds of nebulous matter existing in space is not new. The novelty of the present-day conception lies in its knowledge of the colossal extent of nebulosity, the proportion it bears to the rest of the universe, and the location of its prevalence with regard to the systems of "solid" suns. Even

Laplace was by no means the first to suggest that the solar system arose out of the evolution of a nebula, though his theory of the process was so striking for the imagination that it has fascinated mankind to this day.

Laplace's hypothesis began by assuming a rotating nebulous mass, or fluid. As the heat of this nebula radiated into space, it slowly contracted. It is a law of physics that, as the mass of a rotating body diminishes, it rotates more swiftly: accordingly, the nebula shrunk, spun more rapidly, and as it spun, flattened out, until finally it became a mere disk. Then, a ring of fiery vapor was flung off, centrifugal force becoming greater than gravity; then, more rings. The rings broke up, condensed, and shaped themselves into separate globular masses — the planets; in turn some of these shed rings, which in turn condensed into moons. Laplace's hypothesis explained beautifully how it happened that the planets revolved in the same general direction and in the same plane, and why the moons did the same.

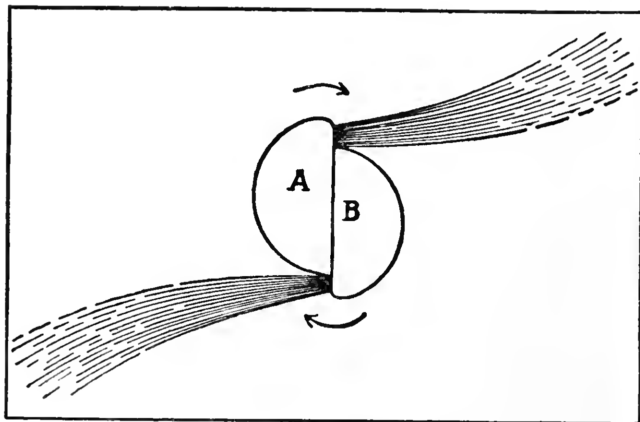
Unfortunately for the hypothesis, however, celestial explorers since Laplace have had to report the truth that the outer planets, Uranus and Neptune, rotate in the wrong direction, as do the outside moon of Saturn and that of Jupiter. Unfortunately, also, we have now learned that the comets, whose orbits follow every degree of eccentricity, belong to the solar system. (It is only since Christmas night, 1758, when Halley's comet came sailing in from the oceans of space like a faithful ship from a cruise at sea, that we have been certain that the comets belonged to the sun.) Unfortunately, also, it has been demonstrated that rings thrown off from a rotating disk would condense, if at all, not outside the disk, but somewhere near its centre. Still more unfortunately, modern astrophysicists cannot admit the existence of a nebula with a high temperature. The glow of the nebulæ is sometimes a reflection of external illumination, sometimes the effect of internal electrical excitement. The gaseous nebulæ are ice-cold. Finally, the extensive travels among the nebulæ that have now been accomplished by the great modern telescopes show that the star-clouds which Laplace thought to be spherical or lenticular, and not only those but thousands more which Laplace never knew, are really spiral in form. The great nebula in Andromeda, long held to be an illustration of the Laplace hypothesis, is now distinctly seen to be, not a disk, but a spiral.

The spiral nebula being, with the more or less solid globe of star and planet, the prevailing form in celestial nature, living astronomers assume it as the earlier form of matter out of which worlds are evolving.

But what is a spiral nebula?

Manifestly, it is a meeting-place of two opposed forces, two streams of star-dust, or, possibly, of two suns.

What would happen if two suns collided? It is a problem that has always



ONE THEORY OF A STAR COLLISION

GREAT STREAMERS ARE EJECTED, AND A SWIFT ROTARY MOTION IN THE DIRECTION OF THE CURVED ARROWS IS SET UP. SOMETHING LIKE A SPIRAL NEBULA RESULTS

fascinated astronomers; there have been many narratives of the imagined catastrophe. The account at present received with the most respect is that formulated by Messrs. Chamberlain and Moulton, the former a distinguished geologist, his colleague an astronomer.

The Chamberlain-Moulton theory is that if one star approached another, the pull of Gravitation would draw out from each protruding arms. Attraction might act so much more strongly on those surfaces of the stars which were nearest each other that the stars would be disrupted; great masses would be pulled away; and, the hot interior being suddenly exposed to the cold of space, new gases would be

formed and those already inside be released. The two stars might explode to fragments. Of these fragments some part would go so far out into space as to wander for millions of years until attracted by other bodies; some would collect, through mutual attraction, about the centre of the catastrophe, in a loose rolling spiral gradually solidifying into suns and planets. If the two approaching bodies were not solid, but fluid or gaseous, there would be no explosion, but the pull of mutual gravitation would draw out great flaming arms. The blazing bodies would wind their fiery arms around each other. Probably nothing would be lost to outer space, in this case, but all kinds of motions and countermotions would be set up in the whirlpool of their atoms, which would finally settle down into a rotating spiral.

The theory has been pretty thoroughly demolished by Prof. T. J. J. See, so far at least as it concerns collision of anything like solid bodies. Dr. See shows that the spiral nebulæ are not found in those parts of the heavens in which, according to the theory, they should be found; that is, where the stars are thickest and collisions would be most likely. It is just there that the nebulæ are most infrequent. Again, the probabilities against collisions are so vast that it is impossible to believe that the great orderly universe depends upon such catastrophes for its existence. (Poincaré estimates that the visible universe contains 100,000,000 suns. Yet he thinks that the chances are that one of them could traverse the Milky Way 16,000 times without a collision. Arrhenius calculates that our sun would require a million million years to come into collision with another. Supposing that there are a hundred times more extinct stars than luminous ones [which is probably the case] it would probably be only ten thousand million years before our sun strikes another.) Yet again, the double stars, not to mention many other quietly associated objects in the sky, afford abundant evidence that Gravitation is not strong enough to accomplish such a cataclysm as Chamberlain-Moulton expect; what we do see exemplified over and over in the sky, declares See, is that when bodies come within range of each other's pull, they set up a peaceful relationship under which they revolve one about another or quietly capture one another.

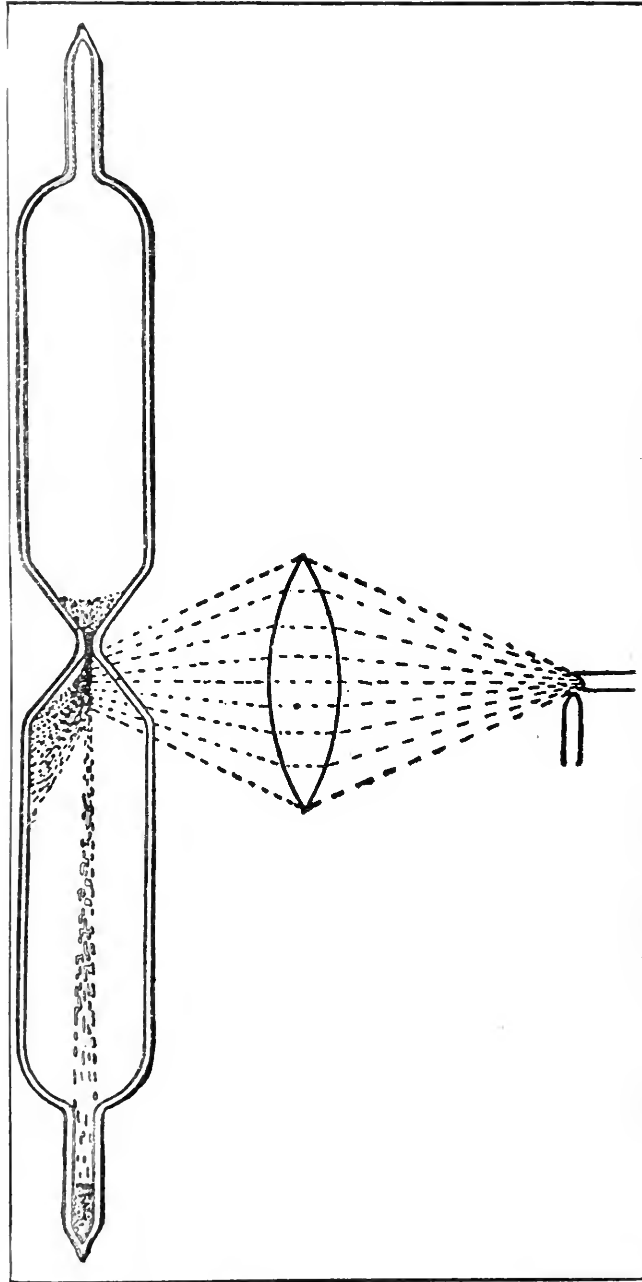
Dr. See is the proposer of what he calls the Capture Theory. The complete cosmogony which this most indefatigable and intrepid of explorers has built up could not be justly set forth in an article so brief as this. Not, at this point, to speak of his demonstrations of the importance of Radiation, or to go into his commanding exposition of the eternal circle of creation displayed in the starry world, it may be said at this point that See holds the creation of masses to have been everywhere a process of accretion. Planets and moons and meteors and asteroids and comets are not things that were thrown off: they are things that have been gathered up. The clustering, centralizing force of Gravitation is ceaselessly and triumphantly at work everywhere. Nebulous masses drift into the presence of other nebulous masses; and the two flow together into a spiral. Knots gather within the spiral; concentration builds up sun-centres; neighboring knots glide into the influence of the suns, becoming planets; or the suns draw together into binaries, triple or quadruple star-systems, or great star-clusters. Smaller solid masses from outside space break into the system; they are captured, as moons, asteroids, comets. Sometimes the capture is complete, and the smaller body falls into or upon the larger; sometimes the smaller is merely brought within the radius of the gravitational pull of the captor, and kept rotating a prisoner within what mathematicians know as "Roche's closed space."

We see the process going on around us; within the observation of recent astronomy, for instance, we have seen Jupiter capture comets away from the sun. Our moon is a small planet which has been captured from the sun by the earth.

The tiny particles of star-dust that fill space alone are not subject to Gravitation; they constitute a resisting medium for all moving masses and thus assist in the work of concentrating the masses, helping Gravitation round up and reduce the orbits of the monarchs that seem to range through space with such majesty, but which are

all being drawn in and in to a centre the attainment of which would mean the extinction of all movement, the death of the universe.

And why is that centre not attained? Why will it never be attained? Newton was so overcome by this sense of the irre-



NICHOL AND HALL'S EXPERIMENT

THE PRESSURE OF LIGHT FROM AN ARC-LAMP FORCES PARTICLES OF FALLING DUST AGAINST THE SIDES OF THE TUBE. SEE PAGE 292

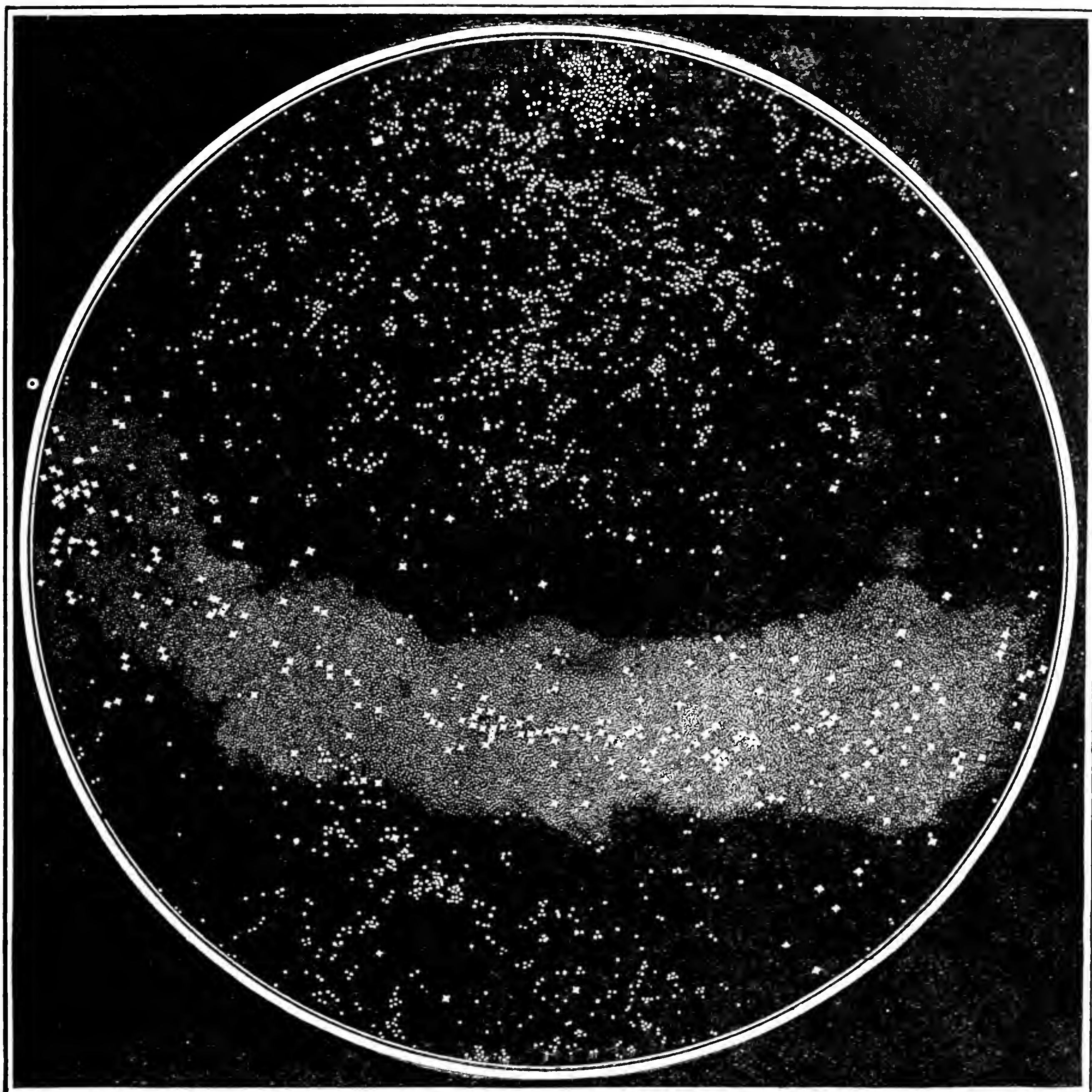
sistible power and ultimate aim of Gravitation that he declared that only the special interposition of Almighty God could save the universe from the final ghastly death of coalescence. What hope of continued existence is there apart from such a special divine act?

The hope, the asurance, lies in the fact that the *great power that Newton made known is eternally being compensated for by another force which is ever at work scattering matter in the form of minute particles. Gravitation is counteracted by Radiation.* Everywhere the large masses drift toward their most powerful centre of attraction, while fine dust constantly being expelled from the stars produce nebulæ in the vacant regions of the heavens; and this concentration of the large masses under gravity, and the redistribution of the fine dust by the action of repulsive forces, is the great law of nature which preserves the order of the starry heavens.

We are now prepared to see the significance of the star-map on page 301. It is a projection made by Sydney Walters from Sir John Herschel's catalogue, showing the heavens as seen in the Northern Hemisphere. The belt is the Milky Way, or Galaxy, with its myriad of stars — a sort of equator of the sky. The crosses are star clusters. Round dots are nebulæ.

How surprisingly definite is the fact, which a moment's study of the map reveals, that the star-clusters are practically all concentrated in the plane of the Milky Way; that the nebulæ are gathered at the poles of the sky; while between the nebulous regions and the Milky Way equatorial belt lie, on either side of the belt, strips of comparative darkness.

Now, the Milky Way is precisely what it appears to be — it is the region, the direction, in which the stars are thickest and furthest extended. The visible universe is shaped somewhat like a lens. The earth is in the thickest part. When we look at the Galaxy, we look from the centre toward the edges of the lens; when we look to the right or left, we gaze out toward the sides of the lens. The latest conclusion — and it is a positive one — from the results brought home by the explorers of the heavens strangely enough merely confirms what might be the impression of a child or a savage looking up into the sky: The stars are vastly thicker and extend vast y farther out into space up in the direction of that great white band that stretches from the Northeast to the Southwest than in any other direction. The



GRAVITATION AND RADIATION SEEN AT WORK

THIS IS A MAP OF THE SKY OF THE NORTHERN HEMISPHERE. THE SMALL CROSSES DENOTE STAR-CLUSTERS. DOTS REPRESENT NEBULÆ. NOTE THAT THE STAR-CLUSTERS LIE IN THE MILKY WAY, ALMOST EXCLUSIVELY. NOTICE THAT TWO STRIPS OF COMPARATIVE DARKNESS LIE NEXT TO THE MILKY WAY. NOTE AGAIN THAT THE NEBULÆ ALL GATHER AT THE POLES. WE SEE HERE THE CLEAR EFFECTS OF THE TWO GREAT FORCES THAT CREATED THE UNIVERSE AND THAT KEEP IT IN EQUILIBRIUM: GRAVITATION, WHICH DRAWS MASSES TOGETHER, AND RADIATION, WHICH IS CONSTANTLY DRIVING PARTICLES OUT INTO SPACE. THE WORLD-PROCESS IS THE CONTINUAL TRANSFORMATION OF NEBULÆ INTO STAR SYSTEMS AND OF STAR SYSTEMS INTO NEBULÆ, AN ENDLESS CIRCLE OF CENTRALIZATION AND DISPERSION

luminous masses that make the Great White Way of the sky are clusters of suns, moving in processions of unspeakable grandeur — moving, to come closer home to the truth, not as a lenticular disc might revolve, but in *two streams flowing in opposite directions, two belts wound like the arms of a starry spiral.*

Looking away from that double stream of light, to either side, the eye of the simplest observer will notice that, just as the map shows, the regions lying to right and left are poor in stars, though the luminosity increases somewhat toward the poles North and South — the fields where lie the great white spiral nebulæ.

What we are beholding is nothing less than the Twin Laws in operation; Gravitation bringing together the great masses in systems of clustered stars in a concentrated zone;

Radiant Energy expelling the tiny corpuscles to the far frontiers, again to be built up into stars, as Gravitation reasserts its force; and again, in the passage of ages, to be resolved into dust.

Such is the Cosmic Cycle. We may agree with one or another of the cosmogonists, accept one or another of the many accounts of the details by which the star system and systems of systems arose — not yet are the details of celestial mechanics certain — but we may not doubt the principle, now clear, that underlies them all. The incessant expulsion of dust from stars to form nebulæ, with the condensation of nebulæ into stars and the stellar system, is the order of the universe. It is by means of this infinitely beautiful compensation that the world-process can continue in an eternal cycle, for which there is neither beginning nor end.

TAXING THE COST OF LIVING

HOW THE GOVERNMENTS OF ALL CIVILIZED NATIONS, BY SPENDTHRIFT EXPENDITURES, ARE SADDLING THE WORLD WITH INTEREST-BEARING DEBT AND THEREBY ARE DEPRECIATING THE VALUE OF MONEY — THE RELATION OF ARMIES AND NAVIES TO THESE DEBTS

BY

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I WISH to call attention to one of the causes of the rise in the cost of living: that is, the increase of taxation the world over, due to the world-wide increase of war-waste and debt.

In most discussions of the "Cost of Living," five or more different phenomena are more or less confused. These are (1) the "cost of high living," (2) the insistence on comfortable living on the part of the American people, (3) the increased cost of living in a new and rich country, (4) the cost of the protective tariff and of the interests that find shelter behind it, and (5) the rising price of all articles as measured in terms of gold.

This last is necessarily accompanied by a rise in interest rates during the period of transition to price levels. This in turn leads to a fall in value of government bonds and other securities bearing a low rate of interest. And this fall in the purchasing power of gold constitutes the real problem. The others are merely local incidents.

But the rising cost of living affects all parts of the civilized world more or less in the same way. It is most distressing in those regions where the body of the people are nearest the bread line, but it is just as real in other regions. The actual rise in cost may be greatest in amount when progress is greatest, as some have claimed, but it is no greater in its effect on the people. It has been asserted that it is most felt in Japan and in America. In Japan it causes greatest distress. In America most fuss is made over it. But it is just as definite everywhere else.

That similar conditions exist the world over is a matter of common knowledge. In a recent address before the United States Senate, Mr. Burton has gathered statistical records and consular reports which show that a steady rise in nominal values of nearly every staple of life has been going on for about fifteen years, or since 1897. According to Mr. Burton, the cost of a year's rations in the United States Army in 1897 was $45.62; in 1900, $63.87; in 1912, $86.32. The "Englishman's dollar," according to Sauerbeck, with a purchasing power of 100 cents in 1897, fell to 97 in 1898, to 83 in 1900, to 86 in 1905, and to 78 in 1908. The American dollar, more nimble in its de-

cline, fell from a level of 100 cents in 1897 to 96 in 1898, 81 in 1900, 77 in 1905 and 70 in 1911.

The average increase in ten years in those staple foods which cover the needs of the working men is about 50 per cent. The reports from other nations indicate the same general increase of retail cost. It is necessary, therefore, to seek an equally world-wide cause.

To ascertain the cause, we must first analyze our problem and eliminate those factors which are due to other than world-wide causes or which were equally effective more than fifteen years before.

Mr. James J. Hill has said that the problem is not that of the "High Cost of Living," but of the "Cost of High Living." The automobile, for example, is a costly tool, a costly toy, a costly method of gaining or regaining health. Many a house has been mortgaged to pay for an automobile. To live in general in a fashion typified by the automobile is high living and high living the world over is and always has been costly.

But the men who own automobiles find a way to pay for them. They could not keep them long on any other terms. Their use may wear out the aggregate of national wealth, but it does not wear out my wealth if I do not own one. That you own an automobile makes me none the poorer, unless the machine in some way gives you power to dodge taxes or in some other way to oppress your fellows. The automobile becomes an economic factor, mainly as the effort expended in building them is taken from other and more useful lines of effort. The growth of fine hotels, parallel with our growing wealth, does not itself make the things I buy more expensive, if I do not buy them in an expensive place. The extended use of automobiles tends to make automobiles cheaper, and the use of luxuries widens the range of industrial operations. The cost of high living falls on the man who lives high. It does not raise the cost of rice in Japan above the reach of the farmer who creates it. The high prices he receives avail nothing if tax burdens rise still higher. There were in 1911 only about two hundred automobiles in Japan, and the nation has not even built roads over which these may be run.

High living has extended itself largely over our country since 1897 in conformity with the general prosperity, in which the people at large participate more fully than is the case in Asia or in Europe. And broadly speaking the cost of high living is an American affair. The rest of the world has taken little increased part in it, but they have suffered equally from the continuous rise in cost of luxuries as well as of necessities.

COST OF COMFORTABLE LIVING IN AMERICA

As to the ordinary cost of living comfortably in the United States, measured in commodity prices, it is a matter of common observation that it is always higher than in Europe. It is likewise higher in some parts of Europe than in others, highest perhaps in Holland and in England, lower in Belgium, France, and the south of Europe generally. In all these countries it is easier to make economies, cheaper to get along if economies must be practised. But to live well, to be clean, comfortable, well housed, well washed, and well fed, the cost is not much less than in the United States.

The difference which actually exists is in part due to the higher wages in America. Working men are less numerous, less oppressed, better paid, a condition which in turn follows reluctantly the higher cost of living. Their scale of living is higher than in Europe and there is a far more wide-spread determination to better the conditions whatever they are. Prices are higher in a new region, an exploitable region, a region of large opportunities, a region in which men have not settled into classes, class-consciousness, and class hopelessness.

With all this, the American distinctly likes to be comfortable, to have good food well served, to live in new and clean houses, and to have attractive conditions when he travels and when he stays at home.

Again, as there are no hard and fast lines of caste in America, the number of those who rise from self-dependence to affluence or competence is far larger than in any other country. While we do not

take seriously our hereditary aristocracy, and while we look askance on the very rich as doubtful of their methods, we are likely to attribute incompetence or aimlessness to a man who in middle life cannot give a certain degree of comfort to himself and his family, with a bit left over for the future. All this is part of the explanation of the high cost of living in America, but no part of the reason why this cost was higher in 1911 than in 1897 or 1905.

WASTES OF A NEW COUNTRY

Other influences which make for a higher cost of living in America as compared with Europe are the waste of fire and the consequently additional cost of insurance, the lack of coördination in distribution of farm products and in other matters, the cinching coöperation of dealers and distributors, the lack of banking facilities in the great producing West and the resultant high interest on farm mortgages, and various other features peculiar to a new and sparsely settled country. With this goes the lack of postal savings banks and of the disposition to use them, the lack hitherto of a parcels post, lack of open markets and of many other contrivances which in Europe help a laborer's money to go farther than it does here.

The waste of the toleration of fraudulent corporations and of get-rich-quick schemes is also a visible factor to our disadvantage. The demand for statutes which prevent the sale of imaginary values ("blue-sky laws") is an evidence that the people are awakening to a realization of the cost of tolerating swindlers and swindling operations.

In the same connections, though with a different emphasis, we may mention the financial manipulations of those agencies commonly designated as "Wall Street."

The tariff for protection is not far away from these, and it is indirectly an agency not only in raising prices but in making them continuously higher. This is due to the shelter or leverage it offers to schemes for stifling competition.

The primal purpose of the protective tariff is to raise prices, in the interest of home producers. In some cases it fails to have that effect, as in the case of grain. In its grain supplies, Europe is dependent on America, the price being fixed in Liverpool, the great storehouse, or in London, the great clearing house, of the world, in accordance with the existing competition. The price at home is necessarily lower, in a degree proportionate to the cost of carriage to London.

In some cases, also, better methods of production, or the stress of overproduction, render the price of some articles at home lower than that ruling in London. But in the case of most goods which are or which may be imported, the price in America is enhanced by the amount of the duty. The suit of clothing which the writer is wearing as he writes cost him $35 in London with an additional duty of $21 in New York. In San Francisco it costs about $60. A certain piece of dress goods known to me cost $30 in London, the duty is $18, and the article is offered in a fashionable store at $80. Part of the cost is chargeable to the element of fashion, and fashion, like fortune, is a fickle jade. So a high increment of profit is necessary, for a left-over garment of to-day's fashion may have no value at all to-morrow.

In general terms, however, the protective tariff is the largest element in our American high prices, especially of clothing and of manufactured articles. No one can estimate how much it has operated to raise prices, for the details depend on the degree in which manufacturers and jobbers can use it as a leverage in forcing up the prices of their wares.

But this does not explain the rising cost of living. The American tariff has not been materially changed in these fifteen years. It is even occasionally "reduced downward," as Mr. Dooley sagely observes, "to the point where the poorest are within its reach." The reduction is so cleverly done that its pinch on the consumer has never been relaxed. Protection is a factor in the increased cost of living mainly in this way. The last fifteen years have enabled the beneficiaries of the tariff, through trusts and other similar agencies, to get steadily a firmer strangle-hold on the ultimate consumer: that is, the people generally. In this way

they have not only maintained high prices but made them still higher. To do the one is to have power to do the other. It is not my purpose to discuss the tariff question further than to insist that from every point of view of good government the special privileges involved in "protection" are violations of the American principle of "equality before the law," and opposed to the people's interests.

But we need not deny that tariff protection has diversified our industries, encouraged the use of natural advantages, and it may have even increased the aggregate of national wealth.

It does all this because its main function is to transfer money into the pockets of the man of enterprise. There are no other pockets from which to take it save those of the common man. To promote the wealth of the wealthy is a most commendable thing in national finance. It is in the hands of the rich that public wealth accumulates most rapidly. Wealth flows into their hands, even without the aid of privilege, but every special privilege helps. The fact that a man is poor shows that he is in fact not a proper custodian of funds. There is no doubt that a community is richer with one great corporation which bestrides the earth, and has kings and bankers, senates and churches, tributary to its power, than with a thousand business firms each striving simply to collect a living for the partners. The process of forming a perfect American Beauty Rose by pinching off all competing buds has been commended as a model of financial development. By the same processes we may develop a giant chrysanthemum, or a corporation of any sort which shall be hailed as "standard."

The fact is plain. Wealth grows most rapidly when its components are in the hands of those who know how to develop wealth. If the purpose of government is to increase national wealth by the quickest and surest way, the method of protection and subsidy is the surest. It does not increase individual wealth, for the struggling little men must pay for the dominant big ones, but the method is sure and it is receiving a brilliant trial in Germany. While we investigate, harass, and dissolve our great industrial monopolies, Germany renders every assistance that governmental alliance, protective tariffs, and systems of rebate render possible. Every help that technical schools for managers, for experts, and for workmen can give is also at their service. The value of this feature to every element in the industrial world cannot be over-estimated.

This phase of German administration is a model to the world, although in a democracy the theory and purpose of technical and industrial education must be different. In Germany the work of the individual is intensified and encouraged in order thereby to exalt the State. In America, the State belongs to the people and still exists for their benefit. In England, the two ideas still struggle for mastery without complete victory of either. The primary business of a democracy is justice, neither to make money for itself nor to help its citizens to make it, but to see that all have an equally fair chance to do so. In this sense "America means opportunity" and nothing more. Old age pensions, enforced insurance, and the like at the most make slight amends for lost opportunity.

But in the world at large, the world of dukes and barons, of generals and admirals, of kings of finance and lords of exploitation, the ideal of equality before the law does not yet obtain. Wealth calls for wealth; privilege for more privilege.

It is plain, however, that if any one grows rich in a community, the whole community is the richer for it. The lustre of his prosperity is in a fashion reflected from every face. This creates as it were an atmosphere of affluence, and where affluence is, all the other charms of life soon gather. There is nothing so fascinating as the movement of enterprise, and nothing accelerates it so much as governmental push, the transfer of the force of the many to the designs of the few.

One feature of all this is a heightened cost of living. As the elements of prosperity gradually strengthen their hold on the articles they handle or create, we find that Senator Burton is right in claim-

ing that this rise in cost is greatest in the progressive countries of the world.

When, in 1897, world prices began to rise, with them came the rise of trusts, industrial combinations, and enterprises extended and expanded by means of earnings based on false values — that is, on watered stock. These are not peculiar to the United States, but have been more or less dominant throughout the range of the "Great Powers" and of their colonial dependencies.

These are not altogether or even mainly an outgrowth of the protective tariff, although in almost every case and in every nation their influence has favored the extension of "protection" and from protection they have drawn increasing strength. This increase of monopoly, this accession of shelter and leverage toward the maintenance of prices, must be a factor in the rising cost of living. How great a factor this is, perhaps no one is prepared to say. Certainly prices would be lowered, and their continued rise afterward checked in some degree, if protection were withdrawn wherever it furnishes a check to competition. And every phase of protection of wealth-producing through taxation must be of this nature.

But rising cost is not confined to America alone nor to those countries which have most felt the beneficent influence of the protective tariff. The tariffs of England are laid for revenue only, and in that country as in the United States there has been a steady rise in price of all staple articles. The fact that the "Englishman's dollar" has fallen to 78 only, while the American's dollar stands at 70, may measure in part the effects of privilege in stifling competition. For world effects, we must look for world-wide causes. Free trade, fair trade, taxed trade and trade untaxed——these matters, while entering into the total of money stress and money abundance, are more or less local and temporary in their chief effects.

Preceding the year 1897, we had a financial panic especially severe in America, a period in which liquidation was imperative and money as a consequence scarce and dear. The prices of almost all articles and notably those of farm products were abnormally low, and the farmer with the rest of us was in debt and distress.

INCREASED AMOUNT OF GOLD

This same period of rising prices has been accompanied by a great increase in the output of gold mining. In the fifteen years following 1897, the amount of gold in the world has been increased by half, from about $7,500,000,000 to $11,000,000,000. The average annual increment is now more than $400,000,000, about $100,000,000 of this being consumed in the arts. And these sums are cumulative, the amount each year being added to the previous stock. It is natural to assume that, as the price of gold as measured in other products has steadily fallen as the stock of gold has risen, the one fact has been the cause of the other. It is not clear to what extent this is true, nor even that it is true at all, although most economists admit it as a partial explanation of the rising cost of living.

If the over-production of gold is advancing beyond the demand it is clear that its value must fall. But it is not evident that the demand is much affected, the one way or the other, by the increase in quantity of its measure of value. Gold is the nominal basis of credit, and the total gold reserve of the world is very small compared with the bonded debts of civilization (about $60,000,000,000) and the debt increases more rapidly than the reserve.

It is also uncertain what value, if any, we must give to another factor, that of waste in seeking for gold. Prodigious sums are each year wasted or transferred to undesirable hands through the exploitation of mines which do not pay, or through the operations of swindlers. If these sums be added to the cost of gold there is not much aggregate profit in gold mining.

It is not clear that great accessions to the gold stock in the past have materially or permanently raised prices. If this were an important element, it should not have been felt in 1897 nor in the years immediately following, but its force should be cumulative corresponding to the increase of the stock of gold. Apparently also the gold output of the future is likely

to become less rather than greater. While not denying the reality of the gold increase as a factor in raising prices, we may well question its leading position in raising cost as distinguished from prices and in effecting an abnormal distribution of the wealth it produces.

CHEAPENING OF GOLD PROCESSES

More important, it would seem, is the fact that under new processes of metallurgy gold can now be obtained at a cost lower than the cost fifteen years ago. The cyanide processes extract upward of 90 per cent. of the actual gold, while only about 60 per cent. was obtained by the cruder methods. The great mines of the Rand, it is said, with their output of about $1,750,000,000, could not have been worked by the old processes. The value of all gold must be affected by the cost of obtaining more. In so far as gold values are the result of cost of production, the better methods must tend to lower them. It is not clear, however, that the cost of production is the chief factor that regulates these values. What the value of the factor of the cyanide process may be in cheapening gold values, no one can say.

But it seems certain that in this regard the climax is already reached. Not many new gold mines have been opened under the stimulus of cheapened methods. The impetus to mining speculation is already spent, and while it lasted it was productive of waste rather than of wealth.

Most of the new gold has come from the working over of the abandoned dump heaps of earlier mining operations. The best mining engineers claim that the recent increase in gold production is "due to the discovery of a process, not to the discovery of mines. The enlarged supply comes from the old sources and the increment is constantly lessened as the old material is worked over with the resources of modern science. To be sure, there may be a discovery of either still another process of extraction or of unimagined mines, but one is as little likely as the other. Meanwhile, with the constant cheapening of gold, there is a constant tendency to lessen the frenzy of the attack upon the old stock of raw material of what may be called the manufactured article. For, in fact, the new processes are almost processes of manufacture. So many yards of material, so much cost for working, so much profit and ultimately an end."

In any event, whatever weight we may attach either to the increased output of gold, or to the increased cheapness of production, there can be no doubt that in both regards the world has reached a practical equilibrium.

INCREASE OF TAXATION

There remains but one other important world factor in the world-wide cost of living. This is found in the increase of taxes since 1897, and in the withdrawal, as supported by these taxes, of millions of men from productive labor.

This change followed the costly and calamitous Boer War, and was marked by the great increase in naval expenses, by the building of dreadnaughts costing $6,000,000 apiece or more, and of superdreadnaughts ranging upward to $15,000,000, with parallel increases of expenditures military and civil in all directions and almost everywhere. These expenditures were added to the rapidly growing interest charges on the bonded indebtedness of the world, the bulk of this being the debt for past wars, with a large and rapidly growing indebtedness for money borrowed for municipal and other commercial or industrial expansion. No matter who holds the bonds, interest must be paid, and to pay interest swells the burdens of taxation. A loaned dollar, which has the certainty of being more and more heavily taxed with each succeeding year, calls for an increased rate of interest proportional to its prospective loss in value when it is to be repaid. Any article must rise in price when its value is measured in terms of a progressively reduced because overtaxed dollar. This condition is partly recognized in Professor Irving Fisher's ingenious scheme of forming a stable dollar, by exacting a seigniorage (charges for coining) equivalent each year to the rise in the general average of prices above some recognized normal. Thus if

the present dollar is 30 per cent. below the normal, a charge of 47 cents could be made for the coinage of new dollars. This would tend to bring the old dollars up to the same level if the regulation was international. If a scale later than that of 1897 be desired the rate of seigniorage could be lower.

If, then, the scale of prices of articles in general has been raised in terms of gold by excessive taxation, the same taxation could be applied to gold with the effect of maintaining a relatively stable equilibrium. The price of gold would then rise or fall with that of other useful articles. International agreement might bring such a result, although the people might substitute bullion certificates for coinage, as they did in California during the Civil War. Whatever the value of this plan as a remedy for the unstable and falling dollar, it is based on a theory of causes not far from that herein set forth.

If our view is correct, the fall of gold is closely related to reckless financial administration of the leading nations of the world. Not one of these has any adequate check on extravagant appropriations on the part of its cabinets or legislative bodies. To spend money is a chief function of both these groups, whether in a monarchy or a democracy. Representative government is even more lavish than most kings could ever afford to be.

In the *Economiste Française*, M. Leroy Beaulieu has lately declared that "the world at the present moment is excessively badly governed. It has rarely been so badly governed. It is in the hands of incurable prodigals and improvident experimenters. Public credit can be maintained by a vigorously strict financial management, full of foresight," and that no nation at present seems to possess.

In 1911, the bonded debt of the nations amounted to about $37,000,000,000. These sums were virtually pawn checks, the cost of wars already fought. The annual interest charge on these was more than $1,400,000,000. The annual naval expenses of the seven "most progressive" — that is, most wasteful — nations rose from about $250,000,000 in 1897 to $629,000,000 in 1911. The total annual expense for army and navy of these nations rose from about $900,000,000 in 1897 to $1,742,000,000 in 1911. The number of men withdrawn from productive work rose correspondingly. Meanwhile, municipal indebtedness rose in like proportions, with its burden of taxes and of officialism. The bonded debt of the British cities was in 1897 about $1,500,000,000, in 1911 about $3,800,000,000. In France the bonded municipal debt was in 1906 about $800,000,000, in 1911 about $12,000,000,000. In Germany the municipal debt of most cities has doubled every ten years for a long time. The aggregate in 1906 was $1,825,000,000. It must now be at least $2,500,000,000. The municipal debts of the United States aggregate somewhat more. They stood in 1902 at $1,765,000,000. The total bonded debt of the world, war debt and municipal debt, is somewhat more than $60,000,000,000, or about half the estimated value of all the property in the United States, or about the same as the total wealth of Great Britain. The interest on this sum is not less than $2,500,000,000 per year. The cost of armies and navies with collateral expenses stands now at nearly the same figure. These sums are paid each year in one fashion or another. *They are paid by taxes*, and about half of the sum of all these taxes is exacted in addition to all the taxes paid by the people in 1897.

The severity of taxation varies, of course, with different regions, but the percentage collected on every dollar of working capital or income has its reflex effect on reducing the value of that dollar in the clearing house of the world. In the course of an argument to show that Germany is not suffering from tax-exhaustion, but has still the means to conduct "the next war," (the war against Great Britain), General Freidrich von Bernhardi thus discusses taxation in Germany:

"That the German people should have reached the limit of their tax paying ability is quite impossible. The taxes in Prussia have risen from 1893-4 to 1910-11 but 56 per cent. per head of population from $4.90 to $7.67, tax and tariff together. In the rest of Germany the per cent. of increase is doubtless similar."

For army and navy every individual

in Germany pays yearly $4. In France $5, in England $7.25. In this are counted direct expenditures only, exclusive of correlated expenses of interest, pensions, and the enforced idleness of thousands of men who might be engaged in productive industry. Meanwhile other thousands, unable to care for themselves through incompetence, drunkenness, vice, or congested crowding, are left at home to be likewise a burden on labor. To all this waste must be added the direct burdens of the two great wars of the last fifteen years, the Boer War and the war in Manchuria, their enormous waste going to swell the tax load of the world, for war anywhere is economic waste which spreads sickness throughout the economic system of civilization.

It is said that the total tax rate in New York is two and a quarter times as high as it was in 1897. The indirect taxation of protection which no one can measure has risen in still higher proportion. It then may be affirmed in round numbers that the tax expenses of the civilized world have doubled since 1897. The wealth of the world has risen, but not in the same proportion, and much of the apparent increase in wealth is due to this very fact, of the fall in the value of the measuring standard of gold, due in large part at least to excessive taxation. And the tendency of all these operations of debt, borrowing, tariff protection, and the like is to swell the wealth of the banker and the lord at the expense of the common folk. Many little streams of privilege join to swell a great river.

All the nations of the earth are devising new methods of taxation: income tax, inheritance tax, syndicate concessions, government monopolies — liquor, tobacco, salt, camphor, railroads — without giving up the old forms of exaction.

The population of the United States in 1911 was 93,722,509 persons. The tax burden of city, state, and nation amounts to $38.50 per capita, "establishing a record of public expenditure which no other nation on the globe approaches or presumably is anxious to emulate."

All taxes, however levied, constitute a confiscation of private property for public purposes of greater or less importance to the individual. A large and varying percentage represents avoidable and therefore harmful waste. All these burdens fall finally on those groups which have least power of resistance. All of them tend to reduce the future value of the monetary unit. As most of these imposts are made through indirect tariff exactions, proportioned not to wealth or income but only to consumption, they fall far more heavily on the farmer and the laborer than on the men of wealth. The wealthiest American, as Mr. Fels observes, "can eat only one meal at a time and only three or four meals a day." A poor man does not eat as much as a rich man, but the difference is less than the difference between their property holdings.

The increase of taxation falls on the middle man as well as on the others. He has, however, a certain power of self-protection by putting up his prices. If he can maintain them singly or in co-operation through monopolies or trusts, the producer or the consumer must suffer. In any event the ultimate incidence of increased taxation must fall on those social units which have least ability to strike back. As matters are, these groups are the working men, the men on fixed salaries, and those dependent on annuities. As the purchasing power of a dollar will be less in ten years, the rate of interest tends to rise. It tends to fall with the settled civilization of a country with the relative decline in opportunities for special enterprise or successful exploitation.

Since 1897 the tendency of interest rates has been upward. At the same time bonded debts bearing a low rate of interest have steadily fallen in value. It is recorded that the British Consols, once "the premier investment" of the world, at $2\frac{3}{4}$ per cent. stood at 113 in 1897. They are now quoted at $73\frac{1}{2}$. Calculated on a 3 per cent. basis, their real value in 1897 would have been $123.28, their actual value at present $93.90. Similar depreciation has taken place in the values of the bonded securities of France and Germany, and in general in all "gilt edged" low interest bonds. This has turned public attention to the local mort-

gage which bears a higher rate of interest. People have been led into a reckless preference for securities with uncertain basis over the smaller but certain earnings of the low-priced bonds. But all recent national borrowings have been made at a higher rate. The Government of Prussia, for example, has paid 5.20 per cent. in New York on short period loans.

To sum up: In the judgment of the present writer the primary factor in the rise of the cost of living the world over is the fall in the value of gold due to excessive and growing financial exactions. In other words, it is produced by the steadily growing encroachment of government on the individual through the Indirect Tax and the Deferred Payment, the two agencies of tyranny in the past, now used for the self-oppression of democracy.

The function of government and government officials is to spend and not to save, and each government has the mediæval obsession of spending for show and for defense against imaginary dangers rather than for matters which directly concern and directly help the people.

To state the problem in another form: The common man has too many mouths to feed beside his own and those of his family. The long roll of those fed by tax increments is steadily growing as grow the taxes which support them.

It is estimated that one man in sixteen in France is a government official and one man in sixteen in New Zealand also. The percentage is not very much lower in England and Germany. The general fact that such officials are often chosen through favoritism or for political reasons rather than for merit increases the burden on those who have no part in the choosing. One cause of the spread of the social democracy in Europe is found in the exclusion in some countries of its adherents from the public service. To shut out of the public service any type of men on account of political ideas makes for inefficiency, corruption, and discontent. To add to these burdens we have in all lands the hundreds of predatory rich and the thousands of desultory poor, equally a burden and a growing burden on Society because their earnings are less than the cost of their yearly keep. A steadily increasing number of men are economically idle through employment in the extension of war armament. As the navies fade away after twelve or fifteen years of idleness, the effort expended on them is economic loss.

It is said on good authority that one man in every six in England is in some way personally or financially interested in the extension of the army or navy. All these are so many more mouths to be fed by the common man of the nations. If the tax payer had only his own to feed, the law of supply and demand would soon abate the rise in cost of living.

The wealth of the world increases amazingly through scientific invention, through commerce, and through the betterment of social relations. Its nominal wealth is also rapidly increased through the fall in the value of its standard of measure. Still more rapidly rises the cost of administration, and the greatest of the items of expense are in lines which are wholly unproductive either of wealth or of well being to those who pay the taxes. At the best these expenses constitute a vague insurance against evils which may never come, and which they help to create.

If these views are at all correct, and they are presented tentatively and in a spirit of modesty, we find in this rising cost a dangerous portent in world economics. It is the sign of a condition that must be worse before it can grow better, for there is no visible sign that any nation, whether monarchy or republic, is likely to reduce its army of non-producers, to pay its debts, or to abate its taxes. The enforced assessments of the governments are causing a great and growing unrest among the people. There would be a far deeper unrest if posterity could be heard from, for it can only save itself from final bankruptcy by new inventions and new exploitations or by a frugality of administration of which no nation gives an example to-day.

When we consider how persistently the ultimate citizen is imposed upon, under the guise of patriotism and protection, we can appreciate the remark of Bernard Shaw that "Man is the only animal that esteems himself great in proportion to the number and voracity of his parasites."

THE TALKING TICKER

A NEW INVENTION — THE MAGNAPHONE, TELEPHONE AND GRAPHOPHONE COMBINED

THERE is a talking ticker now, a machine that will entertain and instruct you for twelve hours on a stretch with the gist of the day's political speeches, baseball scores, election returns, and any other news that seems important. It will tell you all this in your own home as soon as you could find it out if you stood in front of the newspaper bulletin boards, and when there is no vital news to tell, it will entertain you with ragtime or grand opera. When you go to the station the same machine will tell you when your train leaves or what track your friend's train is coming in on. When you go abroad it will help your feeling of security on shipboard; for it enables the captain to give simultaneous orders to all the crew no matter where they are. All these things are true if you happen to live in the right apartment house in Wilmington, Philadelphia, Baltimore, or New York, if you go to the right station, and if you go to sea on the right ship, for the Magnaphone that does all these things is new.

The City of New York has granted a franchise to the magnaphone company, permitting it to furnish, by means of an entirely independent telephone system, not only sermons and music but all manner of news. Already the installation has been made in sixty-four apartment houses in the upper part of New York City, and extensions are rapidly going on. Every six minutes from noon until midnight these sixty-four apartment houses hear a new musical number, the latest baseball scores, election returns, or other items of important news.

By means of the magnaphone instrument itself, which is the chief mechanical novelty of the service, the sounds carried over the wires are so magnified that it is not necessary to hold a telephone receiver to the ear. The sounds carry distinctly to all parts of the room.

A simple use of the magnaphone has been made in the Grand Central Station in New York City. A number of receiving horns have been placed in all parts of the building, with a single transmitter in a telephone booth. The train announcer steps into the booth and calls the arrivals or departures of trains, giving the schedules through the transmitter in little more than an ordinary tone of voice. Each tiny magnaphone instrument at the end of the line enlarges his words and casts them out over the building.

The magnaphone news and music service, however, is a more impressive use of the invention. The present central office can take care of 1,000 subscribers.

The cables, that now terminate at one end of sixty-four receivers, terminate at the other end in several transmitters, from any one of which sounds can be sent to all the receivers at the same instant. One transmitter is used in making the news announcements. A man of distinct enunciation is selected to make them but he never speaks in more than an ordinary tone. Other transmitters are connected with graphophone musical records.

A different kind of transmitter, which is a separate invention, comes into play here. The instrument is not a great deal larger than the sound box of a phonograph and it moves over the revolving graphophone record, in the same way, receiving vibrations from the needle that reports the inequalities in the disk.

In this case, however, the vibrations of the needle are not directly recorded by sound vibrations. They are transformed first into electric waves in the transmitter and sent thus over the wires. Not till they reach the other end of the line are they transformed into sound waves. No

musical sound is heard where the record revolves, but it is heard in many homes of the subscribers. Not only has the voice of the singer or the tone of the musical instrument been preserved for a long period of time on a graphophone record, but when it is again reproduced it is heard miles from the reproducing instrument. In this long distance transmission there is also an improvement in the quality of the music. The hearer is not annoyed by the mechanical sounds of the grinding motor. The only sound transmitted is that generated as the needle point passes over the disk. To the listener, too, there is a gain from the fact that he is not compelled to manipulate records or the mechanical contrivance of the graphophone. He does not of necessity even see the sound-producing instrument. A small horn, which may be concealed in a corner of the library or bent into the centre of a bouquet, pours out melody at all times of the day without his having to touch it, unless he wishes to shut it off.

The line being on a separate circuit from the regular telephone, the subscriber can keep the instrument busy all day long, if he chooses. He can even regulate the volume of the sound by cutting in more or less resistance to the magnaphone instrument. A resistance box with coils offering either 200, 300, or 500 ohms in resistance, gives four different volumes, and the sound may be still further dimmed by removing the horn from the receiver.

At the central station the operators have had their own problems of volume to settle; but they conquered all the difficulties as they arose. Each graphophone transmitter carries current sufficient to furnish 100 wires with full volume of sound. This current is very strong, however, and the transmitter is kept cool by means of a water jacket with a constant flow of cold water — just as a steam engine is water-jacketed. When more than 100 wires are receiving the music service, another transmitter is harnessed into service — an extra transmitter for each 100 additional receivers. These move over the records in absolute synchronization, because all the disks on the transmitting table are revolved by one electric motor, and are controlled by a single switch. The number of wires leading to the central station do not determine the number of transmitters to be brought into service. Only the number of instruments actually connected count, and ingenious methods of telling about how many subscribers are using the service at a given time have been devised.

At the present time the subscribers to this magnaphone service are all taking everything that comes over the line to them. They appear to be as happy with it as is the proverbial small boy with his first pair of copper-toed boots. Nor is it exactly a toy. The news service is accurate and speedy. At least once every hour the bulletins are read over the line. From every available source the news comes into the central distributing station. In fact, a news gathering service is being built up which in time promises to equal that of any one of the great newspapers. Magnaphone subscribers receive their bulletins almost as soon as the news is flashed to the daily papers, so they are not compelled to wait until the next morning for their information. In the transmission of the news of great events, catastrophes, baseball games, and election returns, this immediate service is of recognized importance.

At the season of the year when baseball results are most eagerly sought, even though Wagner's "Siegfried" may be scheduled for 3.42 P. M. on the programme, it has to be elbowed off the list by the announcement to the expectant subscribers that Hans Wagner has made a home run. The baseball reports are eagerly followed and the boys in whose homes the magnaphone has been installed are the heroes of the day in their juvenile neighborhood.

The news and music service is already getting on a commercial basis, and other uses of the magnaphone are being continually discovered. The inventor, Mr. George R. Webb, has given up all other work in his efforts to develop the service to its fullest. When he first brought the magnaphone into existence he was tied up with many business interests. He was president of the United Railways of Baltimore, of the Electric Light Company, and

of the Telephone Company in the same city, and he had been president of the Wilmington, Pittsburg and Allegheny Telephone Company and of the Duquesne Light Company. The magnaphone was at first simply his plaything, but as its possibilities opened up to him he gradually dropped his other interests to give his exclusive attention to his invention. Fortunately relieved of the anxiety about financing it, he has been able to go rapidly ahead. His distaste for premature publicity caused him to make no announcement of his progress until his dream had actually been realized.

DIVERSE USES OF THE MAGNAPHONE

Mr. Webb has achieved a method of synchronizing his magnaphone service with the operation of the motion picture machine, so that the picture and the dialogue can be given simultaneously. This is the achievement toward which Mr. Thomas A. Edison has been bending his energies for so long a time, and if Mr. Webb's method proves universally practicable he will have revolutionized the motion picture business. He is now in France demonstrating his method.

Other extensions of the usefulness of the magnaphone have already been made. The magnaphone has been put on a dredge and it operates so that the foreman standing on the surface of the ground may know, by means of the noises brought up from below, just what kind of material the shovel is working through.

It has been attached to a diving apparatus so that the man at work beneath the water may keep those above him posted as to the exact conditions surrounding him. It has been made use of by a lecturer so that, while speaking from the platform, his voice has been relayed, so to speak, and repeated from various angles of the auditorium. The results are perfect. There is nothing like an echo to confuse the ears of the audience. For that matter, his speech may be repeated almost indefinitely and listened to by hundreds of thousands.

It has been suggested that the magnaphone be placed in all subway and elevated cars in New York City, so that the stations, as they are approached, may be announced in a manner understandable to the passengers. In the meantime, one of the transcontinental railroad companies has arranged to equip all cars on its through service with magnaphones. As soon as that is done those in the last coach will share with those in the first, as well as with those in the intermediate coaches, the knowledge that "dinner is now ready in the dining car." On one of the Hudson River steamboats magnaphones are now in use. One announcer dilates on the beauties of the scenery and all on board are properly informed.

The Navy Department has had the Battleship *Utah* equipped with magnaphones. This has been done not only for the purpose of furnishing entertainment to the crew but also to facilitate giving orders. In time of battle or in time of practice manœuvres, this use of the magnaphone will be of the utmost importance. Orders may be given by the commanding officer and repeated throughout the entire ship, if so desired. The *Kaiserin Augusta Victoria* is also equipped with it.

An ocean liner equipped with magnaphones would make the dangers of the deep much less to be feared than they are at the present time, and the convenience of ocean travelers on ordinary occasions would be served. In the time of dangers, the captain from the bridge could sound warning in every stateroom, and, in fact, throughout the ship, and this could be followed by commands to the crew. By a reversal of the ordinary use of the magnaphone aboard ship, it would be possible for the captain, or the officer in command, while on the bridge, to know exactly what was going on even in the most distant part of the ship.

The New York *Times* tells of other uses:

The Kings Park State Hospital is fully equipped with magnaphone instruments. It has long since been found that any effort to entertain its inmates in a common meeting hall was almost valueless because of their restlessness, inharmony of spirit, and germane causes. But Dr. Macey has found that a magnaphone horn placed in a ward, or a single room, not only provides the best kind of diversion for his patients, but is in many cases

of actual curative potency. The surprise of hearing an unexpected melody issuing from an innocent looking little horn has brought any number of patients out of an uncontrolled hysteria.

It is operated under the direction of the hospital authorities, and is by them turned into any room where its help is needed.

In public parks and amusement places it has already superseded the occasional orchestra. There are several places on Coney Island where its services are being gratefully acknowledged by a nightly throng of music-starved souls whose purse strings will not stretch to admittances to music halls. It is installed in Asbury Park, and will presently be placed in some of the smaller coast resorts which do not rise to the dignity of a public orchestra.

The company controlling the magnaphone is beginning to lease its hundred-unit equipments. The first shipment has gone to an enterprising apartment house owner in Philadelphia. This owner, finding business dull, has arranged to install a magnaphone in every apartment, and has advertised as included in the rent, "light, heat, water, telephone, news and music service, all free." As a result, his apartment house at the present time is without a single vacancy.

THE WORLD RACE FOR THE RICH SOUTH AMERICAN TRADE

A COMPETITION FOR COMMERCIAL SUPREMACY IN WHICH THE UNITED STATES IS PITTED AGAINST GERMANY, GREAT BRITAIN AND ITALY, AND IN WHICH WE ARE HANDICAPPED BY LACK OF BANKING FACILITIES, BY MEAGRE SOURCES OF CORRECT NEWS, BY INADEQUATE KNOWLEDGE OF CONDITIONS, AND BY MISDIRECTED TRAINING OF OUR TRADE REPRESENTATIVES—THE NEED OF YOUNG MEN TO GET THE BUSINESS FOR US — A SURVEY OF THE EFFECTS OF THE PANAMA CANAL UPON SOUTH AMERICA AND A STATEMENT OF OUR UNPREPAREDNESS FOR A GOLDEN OPPORTUNITY

BY

CHARLES LYON CHANDLER

(OF THE AMERICAN CONSULAR SERVICE)

THERE are many barriers against American trade expansion in South America and many handicaps which American investors to-day have to overcome. But perhaps the most important are these: We need, in South America, American banks, American young men, a better informed press, and our investors there need better labor — that is, cheap, dependable labor.

There is not an American bank south of Panama. Here are two examples of what this means to American business:

Shortly after I had taken up my residence in Buenos Aires I went with a friend, a representative of one of the United States Government executive departments, to the cashier's window of a foreign bank in South America, to have a Treasury draft cashed. The draft was literally thrown back in my friend's face. It took him three days to secure the money on that draft. Think of it! Uncle Sam's check so strange a thing in South America that a bank would not take it!

But that is simply the picturesque side: I knew a young American, Herbert Leonard, who had come to Callao, while I was connected with the Consulate, to represent an American tin roofing manufacturer. There was a wealthy rancher at Callao, Elogio Castro, who owned a ranch about the size of the state of Dela-

ware. The order for the tin roofing for all the sheds and shacks on that ranch was a choice morsel, and Leonard spent many days cultivating the acquaintance of the wealthy Don.

Finally, in the midst of a two hours' conversation one day, the rancher let fall a dozen words which made Leonard certain that he had not spent his time in vain and that the order was his. To make a tedious Spanish sale short in words, Leonard quoted prices for the roofing and waited for Don Elogio to send in his order. After several days of delay there came, not the order, but a courteous note, stating that Señor Castro regretted that he could not place his order with the Señor Leonard, as he most assuredly desired to do, because the Señor Leonard had quoted him prices considerably higher than those which he had quoted to several other purchasers in Callao and Lima. Señor Castro ended his letter with a list of the names of those other purchasers.

Of course, Leonard sold his goods, as do all salesmen, on a sliding scale of prices. His quotations necessarily varied according to the size of the order and the grade of material. To dealers he quoted discounts. Then, too, he had a certain margin to meet competition. His price to Don Elogio was fair if viewed in this light, but the Don cared nothing for the reasons why Leonard should charge him one price and some other buyer another.

Leonard dropped in at the Consulate that afternoon and showed me the letter. "It gets me," he said. "I know that he might have got one of my customers to tell him my price, or, maybe, two of them. But how he got the whole list is more than I can figure out."

He and I studied the matter for weeks: finally we located the leak. The bank that Leonard dealt with copied every invoice, every scrap of paper, that related to his business. Don Elogio and half the other prominent men in the town were directors of the bank; consequently, all of Leonard's invoices were at their disposal and his business became public property. Moreover, there was no way for him to escape the trap, much less to retaliate. The whole banking business of the city — and the same would have been true of any South American city — was absolutely controlled by interests opposed to his own. He must either place himself in the hands of his purchasers or else in the hands of his trade rivals, for those banks that were not controlled by South Americans were in the hands of citizens of European countries competing directly with Americans.

Why, then, you may ask, have we no banks in South America? Mr. Samuel McRoberts, vice-president of the National City Bank, of New York, says that all that is needed to cause American bankers to establish branches in foreign lands is for Congress to amend the law to permit American national banks to operate them. Recently, the National City Company sent Mr. William Morgan Shuster, formerly Treasurer-General of Persia, and two associates, to South America, to study the South American field with a view to the betterment of American banking connections there. Since the National City Company operates in a wider field than a national bank, it may find a way to overcome the handicap placed against American bankers in foreign countries by our antiquated banking laws. But there will still be the imperative need for an amendment of our banking laws by Congress, so that all our banks may be free to enter this new field.

It is currently reported in South America that one chain of banking organizations sends copies of every invoice in its hands — and a good many of these invoices are from American customers — to the head office of the bank in one of the European capitals, for the information generally of exporters in that country. That country is one of America's largest competitors in the world's market. Surely, any American exporter can realize what an advantage it would be to him if he knew every price quoted by every French, English, German, and Italian firm to every South American buyer. This practice can hardly be condemned if we Yankees refuse to do our own banking.

Another phase of the situation is this: The more heavily we finance our foreign commerce with our own capital the sooner

we become a creditor nation. The development of new countries is dependent upon creditor nations to finance their growth — to build railroads, canals, and wagon roads, to found factories and other industrial institutions, and, above all, to take up the issues of national and local bonds. There is no part of the world of which it would be more advantageous for us to become a creditor nation than Latin-America. If we do this we will be an integral part of the growth of those countries, and, controlling the financial supplies furnished, we will secure a prior lien, as it were, on its future prosperity and on its business generally. This is the chief argument in favor of that promotion of big business in South America which the State Department has recently taken up under the "Dollar Diplomacy."

The big business, the loans we are floating, and the railroads we are building in South America to-day are substantial boulders which will hold open, against the attacks of our trade rivals, the door of commercial opportunity in South America for the small exporter. But England, France, Germany, and even Holland, have so far anticipated us in this respect as to make it problematical to many, at first sight, whether an American banking institution there would stand the strain of competition with those which have been for fifty years established in the field. This doubt, however, is quickly dissipated when the volume of our commerce in South America is considered. We have the commerce, and that is the essential warrant for the existence of a bank. In one decade, from 1901 to 1911, our exports to South America increased 288 per cent. In that period the total trade of South America increased somewhat more than 150 per cent. To-day the Argentine Republic stands ninth among our customers: in 1900 she was fourteenth. Brazil stands thirteenth: ten years ago she was sixteenth.

The bulk of our investments in South America also indicates the possible success of an American bank in this field. We have thirty million dollars in mines and other properties in Peru; twenty million dollars in packing plants in Argentina; fifteen million dollars in packing plants and railroads in Uruguay: to say nothing of our capital in Colombia's banana plantations and mines and in Venezuela's asphalt fields. Ecuador's railroads are under American control. A Harvard graduate manages the electric and power plant of Rio Janeiro.

The banks of other countries in South America show large earnings. The London and River Plate Bank not long ago paid a dividend of 20 per cent., and the London and Brazilian Bank a dividend of 17 per cent. The British Bank of South America and the Anglo-South American Bank paid 15 and 10 per cent., respectively, and the "melons" of the banks of other nationalities were just about as good.

Again, good banks are needed for national "team-play" in trade expansion. Bankers are the men on the coaching lines in foreign business; the directors of German, French, and English banks have their fingers in many enterprises — in home companies exporting railroad ties or agricultural machinery, in railroad loans, and in sewerage and other business operations. How can our people back home keep in touch with these opportunities for investment and for business unless they have such men on the spot to advise them?

There is one point, a bit aside from banking, that deserves mention here. Nothing is harder for the average exporter to ascertain than the standing, or credit rating, of firms in foreign countries unless he have the assistance of a good mercantile agency. The lack of such agencies has handicapped American exporters in many South American countries very seriously, and until they are established, American bankers in South America could be very useful by supplying the information they usually give.

An American bank would be welcomed in those countries. Just before I left Buenos Aires for the United States the last time, Dr. Jose Maria Rosa, the Argentine Minister of the Treasury, told me that he could hardly understand why we had no bank in Buenos Aires, a city as large as Philadelphia. "The Argen-

tine Government will give all possible assistance toward its establishment," continued Dr. Rosa. "How can your trade with us ever grow, unless you have a bank here, Señor Chandler? It is so very important. Tell your countrymen to come here and found one."

Dr. Eliodoro Lobos, the Minister of Agriculture, was even more emphatic. He said: "Your President and Secretary of State will make their names immortal if they will only get such a bank started. We need such a bank as well as you. Otherwise, our trade with you cannot grow, and nations are better friends if they see more of each other and have more dealings with each other. Your packing people are moving here to the Argentine, and they will require one more than ever."

That last point of Señor Lobos's is worth remembering. The meat producing centre of the world is rapidly shifting to the River Plate. Of all the beef consumed in London, 78 per cent. is shipped from the Argentine. If our supplies of live stock in the United States continue to diminish 9 per cent. every ten years, while our consumers increase 21 per cent., as our census statistics inform us, we shall have to turn elsewhere for our meat, and that "somewhere" will almost certainly be either the Argentine or Uruguay. Are we going to let all money transactions in our food supplies be controlled by our trade rivals?

American shoe manufacturers are now buying a large percentage of their hides from South America. They are competitors in the world's market against the shoe manufacturers of England, Germany, and France. Isn't it rather a serious thing that for lack of amendment of a single law this country should give into the hands of English, French, and German shoe manufacturers the knowledge of prices paid by their American competitors for their raw material? We are dependent upon South America for more things than we realize, perhaps. How many know that we depend upon the nitrate beds of Chile for all our powder, dynamite, and a great many other valuable commodities in the manufacture of which nitrate is used? We are dependent upon South America for coffee and cocoa. The finest kid skins for ladies' gloves come from that corner of Brazil which juts out into the Atlantic Ocean.

We do not realize the price we pay foreign bankers on this immense trade between the two continents. It has been roughly estimated that the British banks alone have made more than eighty million dollars from citizens of the United States in South America, and some authorities will tell you that this is too low an estimate. The toll is constant. It is like the old French seignorial river dues, that never ceased because the river never stopped flowing.

These foreign banks, in those lands for more than fifty years, slowly but ever so surely have reared a great fabric with branches in all the big trade centres. They now present an organization as closely knit as any army or navy, all aiding in the advancement of the interests of their home countries, from the presidents and boards of directors — most of whom are generally interested in railroads and other lucrative South American enterprises — down to the newest "clark," fresh from London. We, also, need such a machine as this for our trade.

THE NEED OF YOUNG AMERICANS

For us the South American commercial field is essentially a young man's field.

The general retail trade — the selling of general lines of hardware, of paint, and of miscellaneous dry goods manufactures to the retailers of those countries — has received little development. That is the business which is to come, and I consider it more important in building sound commercial relations with other countries than the big business. Of course, the big business makes it easier for our exporters to get the little orders of the retail merchants. But many other countries, notably Germany, have already made great progress in clinching the South American retail trade. When we go in for that business we shall have to fight for it and it is only the young men of our country who can secure it for us.

Why? Because little orders are placed with friends. For the drummer selling

to Jeremiah Smith, of Kalamazoo, it is worth a good many orders to gain the good graces of Mrs. Smith and it is a strong point for that drummer to be on such terms of easy familiarity that he can ask if Jeremiah, Jr., has recovered from the measles. This is just as valuable with Señor Alvarez, of Montevideo. Indeed, it is much more valuable. You know that in our own country the element of personal relations in business getting is much stronger in the South than in the North, and if you multiply this difference many times you will have a very good idea of the importance of personal relations in business fields in South America.

One of the hardest things for an American salesman, newly come to a South American state, to understand is why he must spend so many precious days simply attempting to gain a social entree to the Dons as a preface to the privilege of placing a business proposition before them. The only reason is that it is the Latin's way, and, if his business is to be gotten, the American salesman must first learn and appreciate his customs.

Only the young man can do this. He has the adaptability and the years to spend at the task. He expects to spend a long time preparing himself. Germans in the foreign trade are trained from — well, I often wonder how many years a German *will* spend just to saturate himself with a knowledge of the country where he is to be his firm's business getter. A German does not leave his country for a business tour to drum up business. He comes to live in the South American country, and when you find him finally established he has become about the nearest facsimile of a South American incidentally engaged in representing a German house that you can imagine. And this is why the Germans are getting the general trade of these countries.

I remember one day when, as I sat in the office of the Consulate at Montevideo, a type of the older, seasoned American salesman entered. He practically admitted to me later that the only reason he had come to the Consulate at all was that someone had told him that it was the right way to begin and that the only thing he had in mind to ask me for was a list of customers, with their ratings, so that he could get out that afternoon and hustle for business. He had one of the best lines of hardware, he told me, ever sold out of Chicago. For ten years he had represented his company in various places through the Northwest, and he had recently come from Michigan, where he had made such a success that, when the directors of his firm decided to branch out into foreign lands, they had chosen him as the logical man to get the business.

He knew his line. If I had just then been in the market for an automobile I believe he could have convinced me that it was one of his magnetic tack hammers I really wanted. I asked him if he was as steady on his feet with Spanish as he was with English. He said he had been at it for six months before he left "the States" and that, although he did not profess to be able to colloquialize in the lingo, he guessed he could brush along in it well enough to sell his goods. I fired a fair amount of Spanish vocabulary at him. It submerged him completely. I suggested that perhaps he would find it difficult to sell his goods to merchants who would counter to his arguments with an even more formidable shower of Spanish than that to which I had treated him. For about fifteen minutes we argued the point. I suggested also that he familiarize himself with the way of doing business in Montevideo, with the banking facilities, and with the Spanish idea of credit. Although I do not clearly remember all the details of our talk I distinctly recollect his closing remark.

"Well," he said, squaring himself, "I sold this line in Kalamazoo: I guess I can sell it in Montevideo."

Having written that line out, it appears to me almost too absurd a speech for a man of his experience to have made, yet I have heard others express about the same idea. To do this particular salesman justice, he proved a sticker. He gave up in the long run, but he clung to his forlorn task longer than I had ever supposed he would. I accompanied him on his first few tours. It was pitiable to see him grope for the few familiar words

in the sonorous Spanish of the merchants and to try to catch just enough to get the sense of their conversation. Even more lamentable were his vain efforts to phrase some incontrovertible argument about the value of his wares in his one-syllable Spanish. As much as I could I acted as translator for him. A Spanish merchant would raise a question. The drummer would instantly take from his resourceful mind some smashing argument which he had used a thousand times at home — prepared to obliterate every objection of the doubting Don — and then he would wind up with a two-line statement that was lame, halt, and blind and that must have sounded to the Don like an extract from a primer. When he was asked to give six months' or more credit he seemed to think that I had purposely guided him to every dead beat in Montevideo.

One of the first questions he put to me was, "How could he start an advertising campaign?" I suggested a couple of the best weeklies — a curious combination they are of our own *Saturday Evening Post, Life,* and *Police Gazette.* No. What he wanted to do was to circularize his trade individually. That practice was then new in Montevideo. I happened to remember a printer who, on opening his establishment, had sent out a circular to his friends; so I secured a copy of the circular to show the American salesman how circularizing was done in Montevideo. For he had, even in that short time, come to see that he would have to follow custom to get business.

After laboriously reading the circular he remarked to me that he could not tell from it whether the printer had invited his prospective customer to visit him for a month or was proposing for his daughter's hand. Well, that is the way they do such things in Montevideo. One sends out a business circular. In itself that is an innovation, but Heaven forbid that one should rudely quote prices in that circular. One simply calls to the attention of the highly esteemed Señor Gomez the exquisite pleasure which it would afford the proprietor of the printing establishment if he, the highly esteemed Señor, would, when having under consideration such work of that character as his great and wonderful business must constantly demand, only bear in mind the fact that there was in Montevideo such a printing establishment, which, although it was not quite good enough to do such work as was due the illustrious Señor, had nevertheless a proprietor who would consider it the highest honor of his life to be given the slightest intimation that he was worthy to be thought of in connection with the esteemed Señor Gomez's orders.

The Yankee salesman declared that, if he had to begin with that soft pedal and work his way up with a series of circulars until he had gotten sufficiently into the merchant's graces to be granted the privilege of putting a business proposition before him, he guessed the business wasn't worth the time of any man over eighteen years of age.

After this salesman had returned to the United States, his firm, probably at his advice, sent to Montevideo a bright young man who had had only about two years of sales experience but who had on the other hand a very sound, if somewhat stilted, command of Spanish to back him and who was willing to bide his time, as, indeed, at his age he could afford to do. When I left Montevideo this young man had worked up at least enough business to justify his existence and had acquired a circle of friends and a familiarity with the ways of the people which I knew would in the long run bring him business beyond his dreams. Perhaps you will think this is an exaggerated case, but it is not.

THE NEED FOR BETTER NEWS SERVICE

Another of the greatest handicaps against the American in South America is, I think, the lack of good news service between the two continents and of sound knowledge of South American history and economic conditions. A great quantity of distorted and injurious "news" is circulated about us in South America, and, as a consequence, a prejudice against us is created which is perhaps our greatest handicap in making friends. I read some time ago that Secretary Knox in a speech quoted an article from some South American journal, printed as a despatch

from Washington, stating that the American Government was this year showing a deficit in governmental expenditures for the first time since the Civil War and that as a measure of economy it was intended to abolish the office of Vice-president and to reform our national lottery. I have frequently read statements in South American papers that described our international policy in language even more absurd than this.

This need of better knowledge, of correct daily news, is as great with us as with South America. By reading any one of our metropolitan dailies we can follow the course of the Home Rule Bill through the British Parliament. Yet what have our papers said of the sweeping electoral reforms which the Argentine Government has recently adopted? Perhaps it is fortunate that we have had so little to read, for what I have seen printed in American papers is mostly untrue, and so, when the exchange of news is bettered, we shall not have so much that is wrong to unlearn. And how many Americans speak Portuguese? How many know that as much Portuguese as Spanish is spoken in South America? How many know that the label on the can of tooth powder shipped to Pernambuco must be printed in Portuguese and on that shipped to Bocas del Toro or Bahia Blanca must be in Spanish? No, we are still asking the man from Buenos Aires if he has any hotels in his city. We wish to know if the Argentine has any roads that an automobile can run over, though I had an office in the same building in Buenos Aires with an Italian automobile salesman who sold two or three $5,000 motor cars every month.

Our schools should pay more attention to this need, and, above all, our colleges and universities should not merely lay much more emphasis on teaching Spanish and Portuguese but should insist that instruction be given in at least the rudiments of South American history and economic conditions. For a nation of ninety-four millions of people we are absurdly inadequate in our training of young men for as useful and old a profession as exists — international trade. Our whole system of modern language instruction needs revision, with teachers who can teach the Spanish of Madrid rather than the Spanish of East Boston. How many institutions are there such as the Boston High School of Commerce and the Philadelphia Commercial Museum? At how many colleges can one learn a word of Portuguese? We have more than $150,000,000 worth of trade with Portuguese speaking countries. Do you think that one high school boy in a thousand can tell you that Buenos Aires is larger than Philadelphia or that the highest railroad in the world is in Peru?

There is nothing more humiliating for an American than to visit one of the large South American universities and find the eager young men there studying Kent and Story in law, James in philosophy, Trent in American literature; or to hear the correct answers given to such questions as: "How long was the term of the President of the Confederacy?" or "Who was Edward Everett?" and to imagine the answers the students in our universities might give to similar questions about Rivadavia or Unânue or Garcia Moreno.

When the ships of the Atlantic and Pacific brim Culebra Cut there will set in a tide, such as once flowed in our own country from East to West, that will call out from our universities, from offices, and from shops the youth that has most ambition, most daring, most resourcefulness, and most adaptability. Colonel Goethals tells us that he is going to put the first ships through the Canal next August; so it does not seem too soon to get ready for the change to-day. Certainly, none of the great exporting nations of Europe are letting the grass grow under their feet, and we cannot afford to let this South American business escape for lack of preparation of our young men.

SOUTH AMERICA'S NEED OF IMMIGRATION

The Panama Canal is viewed by Americans almost wholly as a channel of commerce for wares. But vessels carry more than wares. In their steerage are future nations. The Panama Canal is certain to prove one of the greatest channels of immigration in the world. It is just here

that so many people make a mistake in prognosticating the influences of this Canal. They compare it at once with the Suez Canal; they modify the effect of that waterway to suit the commercial conditions prevailing in North and South America and present to you a complete table of alterations in the world's trade which the Canal is to bring us. But any comparison between the Suez and the Panama Canals is impossible, because the Suez Canal connected 400 million East Indians with 200 million Europeans. At one stroke the two most populous continents of the earth were given the cheapest and quickest transportation route.

Now South America is still a country for settlement as well as for development. Only after a person has roamed over that vast territory from Panama to southern Argentina does he realize the sparseness of its settlement and the immense possibilities of its future. Even by touching at its ports he gets a false impression of the continent's population. He sees Buenos Aires with its skyscrapers, its big hotels, and its busy thoroughfares, and he can scarcely realize that it is at the threshold of a still unsettled country, a country of immense cattle ranches like those in our own West twenty or thirty years ago. In Uruguay, one seventh of the people live in Montevideo. The land is held in enormous tracts by wealthy "estancieros" (ranchmen) and the Government is just now trying, by adopting the European scheme of furnishing money at cheap rates to small farmers, to build up a substantial agricultural class. If we touch at the coast cities of Brazil, or even traverse the southern provinces, we get no idea of the astoundingly vast unsettled regions in the basin of the Amazon or in the table lands of the interior.

Therefore, the greatest effect of the Canal is to be in the people it will bring. They will compromise with the present inhabitants of the country to build a greatly altered, perhaps a new, South America, industrially and politically. This change has begun in one country already. Argentina has become a melting pot, and her institutions have felt the change, her commerce has grown beneath its influence, until to-day that country has the second largest foreign trade in the Western Hemisphere. Argentina has received most of the immigration because of the steamship lines from her ports to Europe. The remainder of it has gone only to Brazil and Chile. Now the Panama Canal will bring the steamship lines to the West Coast.

Let us consider what this immigration will mean to the West Coast of South America. (Peru holds the oldest Caucasian civilization of the Western world. I studied there, in the oldest seat of learning in the Western Hemisphere, an institution many years older than my own Harvard.) The Spaniards enslaved the natives but, in time, as so often happens, the conquered in arms became almost dominant in blood. Since that first settlement, Peru has received little new immigration. The benefit of the Spanish influx is dying out. This is true as well of the other countries of northern South America; of Ecuador, of Colombia, and of Venezuela. Bolivia is still almost an Indian country. The immigration which the Canal will bring is certain to revolutionize these countries industrially and probably politically.

The new immigration will give to Peru, for example, new laboring classes. In time it will fill the great void felt to-day — the utter lack of a solid middle class. It will give hands with which to cultivate the soil and energetic merchants to sell the soil's products. One of the most commercial activities of South America is fruit growing. Let us apply the benefits of immigration to the fruit industry of Peru. Wine of very good quality is produced in the Ica Valley. The industry has been carried on for three centuries, since it was first introduced by the Spanish, but, as no people followed them, for lack of labor it has never received any real development. Give this valley new immigration from Spain, Italy, and the islands of the Mediterranean, and you have at once the possibility of a thriving industry.

The banana industry exists to-day successfully in northern Peru, Ecuador, and Colombia, although it is very little developed. The truth is that there is

no market for the product at present, except in Chile. The Canal will give to these countries a market for their bananas, and new immigration will develop the industry.

I have bought pineapples at two for a cent in Lambayeque, Peru. That town is now being connected by railroad with the sea coast. The Canal will give the pineapple growers a market in the United States for their fruit, but Peru will need new blood and virile wage earners if she is to develop these resources. On the west coast of Colombia they are now building a road from Buenaventura to Cali which will place within three or four days of the Isthmus one of the greatest tropical fruit growing districts in the world. It may not be many years before the Peruvian "palta" will be on sale in the fruit stores of New York City.

There are also opportunities for the development of new industries. Peruvian coffee — and I have never tasted better coffee than is grown on the plantations of northern Peru — is produced now only as a garden product for the use of the owners of these plantations, who live in Lima. Italian immigration gave the first impulse to the enormous development of the coffee industry in Brazil. Why shouldn't it do as much for Peru?

Directly, then, immigration into South America will mean cheap, good labor, and, indirectly, it will mean a steadying influence politically upon the governments and a quickening influence upon the industrial life of the nations. The American investor, the American exporter, can both count these changes to their benefit. All these changes have been seen in the Argentine Republic. Half of the people of that country either came there since 1857 or are descended from people who arrived there since that year. Therefore, Argentina is no longer strictly Latin-American in the sense that the northwestern countries are. It is cosmopolitan. The peoples of both southern and northern Europe have placed an indelible stamp upon the nation's institutions. Therefore, the country's commerce has grown, and the investment of foreign capital in the Argentine Republic has increased. It is no longer a country of politics but a country of industry.

WHY OUR CITIES WILL BURN UP

NEW ORLEANS THE MOST PERILOUS OF THIRTEEN CITIES WITH THE GREATEST FIRE DANGER — PRACTICAL METHODS OF MUNICIPAL FORTIFICATION

BY

WALTER S. HIATT

THERE is not a city in the United States that does not daily escape destruction by fire. So fully is this known to the insurance companies, which have the largest stake in that danger, that they can tell you exactly the "conflagration centre" of every important city — can put their finger on the map of every one of the 240 principal cities and say, "Here, at this spot, by all the laws of probability, one day a fire will start that man cannot master, that will sweep your city and do to it what fire has already done to Chicago, to San Francisco, to Baltimore."

This article is written to explain how the insurance companies learned this startling fact, how they know that these things must happen, and what they are doing to avert catastrophes that must result in the loss of millions of money and in the loss of many lives.

The National Board of Fire Underwriters is the organization that has caused a nation-wide study of fire hazard to be made, and the reports of its fire engineers — members of a new and valuable pro-

fession — give a remarkable picture of the danger that confronts all American cities. This organization is composed of representatives of all the principal fire insurance companies, and its business is to study the science of fire risks and to take preventive measures to decrease them. Mr. George W. Babb, of New York, is its president and Mr. George W. Hoyt, of New York, is chairman of its Committee on Fire Prevention.

THE "CONFLAGRATION CENTRES"

Mr. Hoyt's committee knows, for example, that New Orleans has the greatest fire hazard of all American cities, that the point at which its almost certain great fire will start will be not far from the intersection of Camp, Chartres, and Canal streets, and that the conflagration district most likely to be swept spreads like a fan from the Mississippi levee to North and South Rampart streets, touching St. Joseph Street on the south and St. Louis Street on the north. The committee knows also:

That the conflagration centre of Seattle is near the intersections of First, Second, and Third avenues and James, Cherry, and Columbia streets.

That the conflagration centre of Boston is bounded by Boylston, Tremont, Washington, and Court streets.

That the conflagration centre of Philadelphia is near Eighth and Market streets; and that a minor conflagration centre is in the district bounded by the Delaware River and by Poplar, North Sixth, and Somerset streets.

That the conflagration centre of St. Louis is a triangular section rising from the levee to an apex at Fourteenth Street, skirted by Poplar and Carr streets, and with its central zone near Washington Avenue and Broadway.

That the conflagration centres of Chicago are the lumber district, extending along the South Branch of the Chicago River between Morgan and Hayne streets; and the stockyards district, bounded by South Halsted, Ashland, 47th and 39th streets.

That the conflagration centre of Kansas City is not far from Ninth and Delaware streets; of Mobile, near Dauphin and Royal streets; of Hartford, the block bounded by Main, Asylum, Trumbull, and Pratt streets, in the heart of six other hazardous blocks; of Cincinnati, Fourth Street near the intersections of Vine and Elm streets.

And Mr. Hoyt's committee knows that the thirteen cities which in all probability will burn next are the following, named in the order of their fire hazard, the greatest risk named first: New Orleans, Seattle, Boston, Cincinnati, Philadelphia, Chicago, New York, St. Louis, Kansas City, Mobile, Richmond (Va.), Hartford, and Lawrence (Mass.). Many others have a fire hazard that ranks them only a little below these.

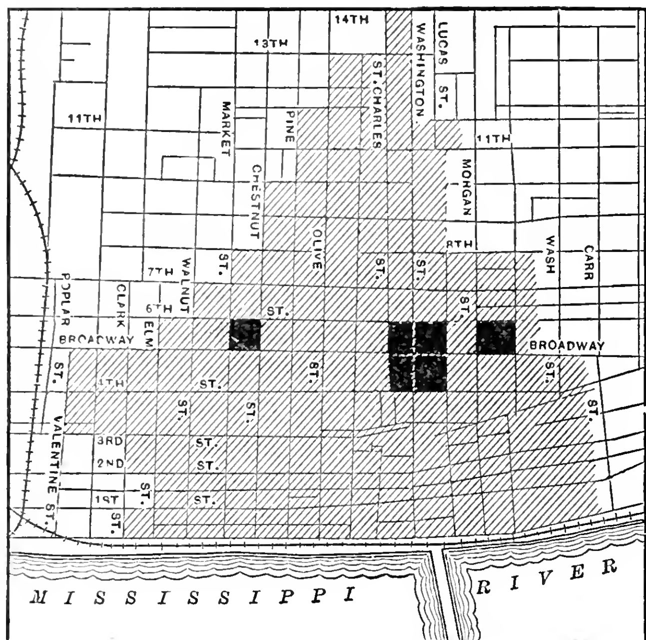
FIRE PREVENTION AS A SCIENCE

How do the Fire Underwriters know these things?

The conflagration possibilities of American cities were not realized until the Baltimore fire in 1904, when forty millions of dollars went up in smoke. Then, the San Francisco disaster of 1906 wiped out the earnings of insurance companies for the 47 years previous—three hundred and fifty millions was the fire loss — and many companies were forced out of business.

With the lesson from Baltimore, that a city with few previous severe losses might readily burn, a committee of twenty men from the National Board visited forty or more cities and showed how it was possible for these cities to go. Indignant citizens accused the committee of trying to boost insurance rates and protested that their beautiful cities could not burn. Unfortunately, however, some of the cities did burn, and in the way predicted. This work of locating fire centres has since assumed such proportions that it has been turned over to the Fire Prevention Committee of the National Board, with Mr. George W. Hoyt as chairman and Mr. George W. Booth as chief engineer, assisted by a corps of trained fire engineers. Altogether, 240 cities have been inspected thus far. Where the cities are growing rapidly, or where any of them ask for special aid, such cities are reported on as often as once a year.

These reports are impartial and point



THE FIRE DANGER OF ST. LOUIS

THE "CONGESTED VALUE DISTRICT," WHICH HAS ITS BASE ALONG THE LEVEE AND RISES TO AN APEX AT FOURTEENTH STREET. THE "CONFLAGRATION CENTRES" ARE INDICATED BY BLACK SQUARES

out defective conditions in the fire departments, in the water works, in the streets, in the electric lighting, structural hazards in buildings, fire hazards in factories, and also in the political conditions. If there has been graft in city contracts for fire, water, or street supplies, the fact is baldly stated. The reports point to the danger zone and generally add that if the fire starts in time of high wind; or drought, when the water supply is low; or in time of flood, when the firemen cannot work, or the water mains are choked; or in winter, when the mains are frozen, the city is likely to be burned up. Special attention is given to hotels and department stores, fire in either of which is likely to result in great loss of life.

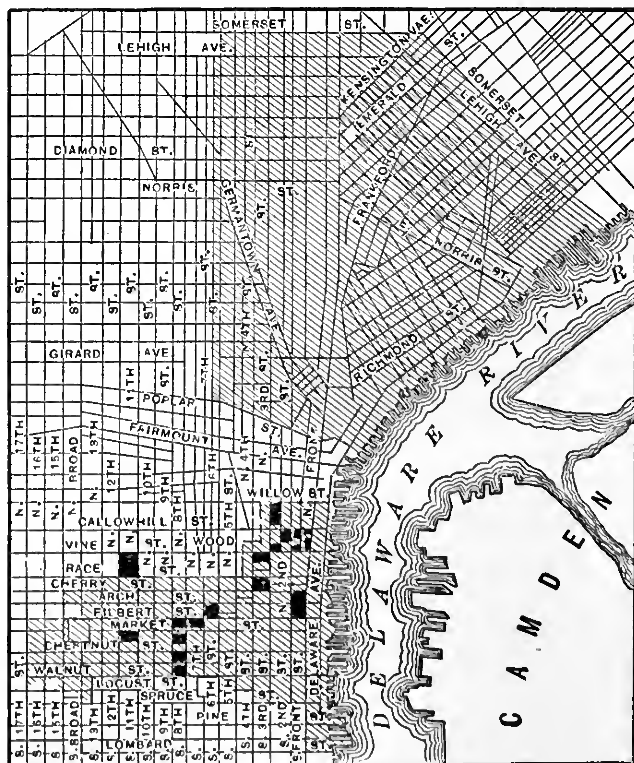
New Orleans stands unique among the thirteen cities named. But as a conflagration possibility, its conditions are illuminative, for they are typical, if exaggerated, of the fire hazards of all American cities.

The hazard of New Orleans lies near and in her famed French quarter, to the north of Canal Street, on its down-river side. Like many Southern cities, New Orleans was built to keep cool. So, not only in dwellings but in business houses, air-wells are found running from top to bottom. This gives the desired circulation of air. There are also many quaint court yards. Both violate all the principles of safety.

New Orleans has also the common and characteristic building and factory hazards of other American cities. This conflagration district, including millions of dollars in values, consists of 109 blocks, built up principally of two-, three-, four-, and five-story frame-joisted brick buildings, "the serious inherent deficiencies of which," says the report of the engineers, "are augmented by light and poor walls, excessive areas, open elevator, stair, and light shafts, and by unprotected mutually exposed windows — all which *preventable* defects exist in great numbers."

The high values represented consist of hotels, department stores, cotton warehouses, rice, sugar, and molasses factories, and liquor and moss storages.

When the engineers made public their report on the city about two years ago, the good citizens of New Orleans — as they have done in other cities under the same spur — rose up as a man and damned them as agents of the vested interests.



THE TWO DANGER ZONES IN PHILADELPHIA

THE GREATER OF WHICH HAS ITS CENTRE NEAR THE JUNCTION OF EIGHTH AND MARKET STREETS. THE LESSER LIES ALONG THE RIVER BETWEEN POPLAR AND SOMERSET STREETS

After a time the good sense of the citizens came to the rescue and a movement was started to save the city from the predicted conflagration. The Progressive Union of New Orleans in particular took up the fight, and firemen were told that they had to depend on their efficiency for their jobs, not on their influence.

The fire chief was made more than a figurehead—and nearly every chief knows what to do to protect a city, if let alone by the politicians. The city has further begun enforcing her building code, her electric light and explosive ordinances. New buildings are partly fire-proof, old ones are protected by wire glass, automatic alarm and sprinkler systems, "water blanket" systems, and other devices.

The result of the movement is shown in the present fire loss of New Orleans. Last year it was $1.18 per person, or $406,765 for the city. Previous years showed a per capita loss of $4.27 per person, or a total for the city per year of $1,320,436.

But the city still has no high pressure system; and she cannot tear down all at once her old buildings. The conflagration centre of the city has but one fire break — the 170 feet width of Canal Street.

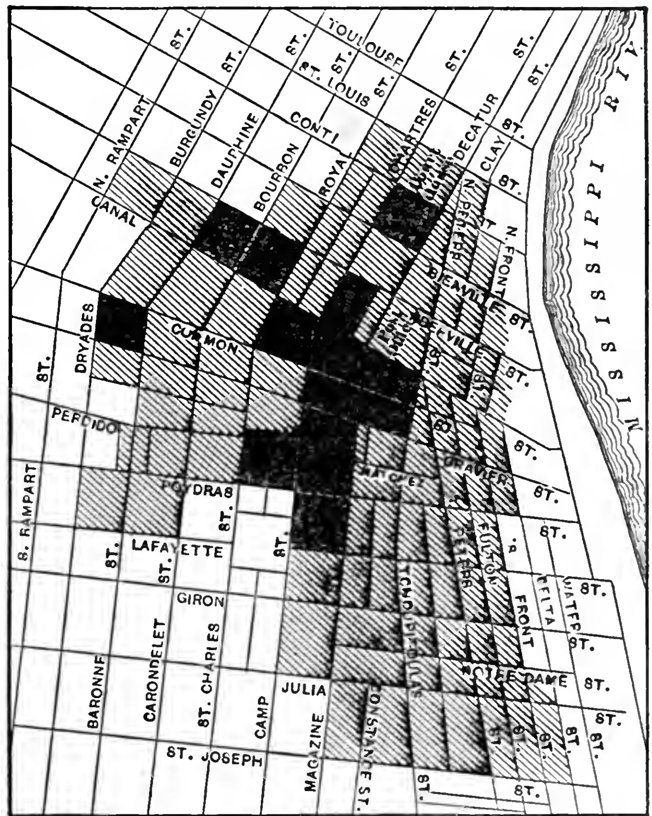
"The only salvation for New Orleans," the engineer of the National Board of Fire Underwriters said to me, "is for her citizens to keep fires from starting, or to get to them and put them out while they are yet small."

Seattle is another city of typical fire hazards. "The natural anarchy of the American temperament does not readily respond to admonition," says Franklin H. Wentworth, secretary of the National Fire Prevention Association, in one of his wonderful monographs on the prevention of fire. In thriving Seattle, people are too busy to heed the warnings of the fire engineers who visited their city two years ago. The startling report of the inspecting corps of engineers produced hardly a ripple.

Yet Seattle has three hazards. One is the shingle roofs of the residential section, another is the shingle, lumber, and wood plants in Ballard and Fremont, and the third lies in the conflagration district proper — the business section off Elliott Bay. Given a fire in a high wind, flying brands could easily set fire to the whole city. This happened in Chelsea and in Houston, Tex., and in many other cities.

Seattle, a city of 260,000, has grown rapidly since the opening of Alaska. Dwellings and business buildings have gone up with the rapidity of haphazard summer colonies. Fire could take hold as easily as it did in the Coney Island resorts in 1911, when two and a quarter million dollars' worth of property vanished in thin air.

The conflagration district proper, in the high value business district, extends for



CONFLAGRATION DISTRICT, NEW ORLEANS

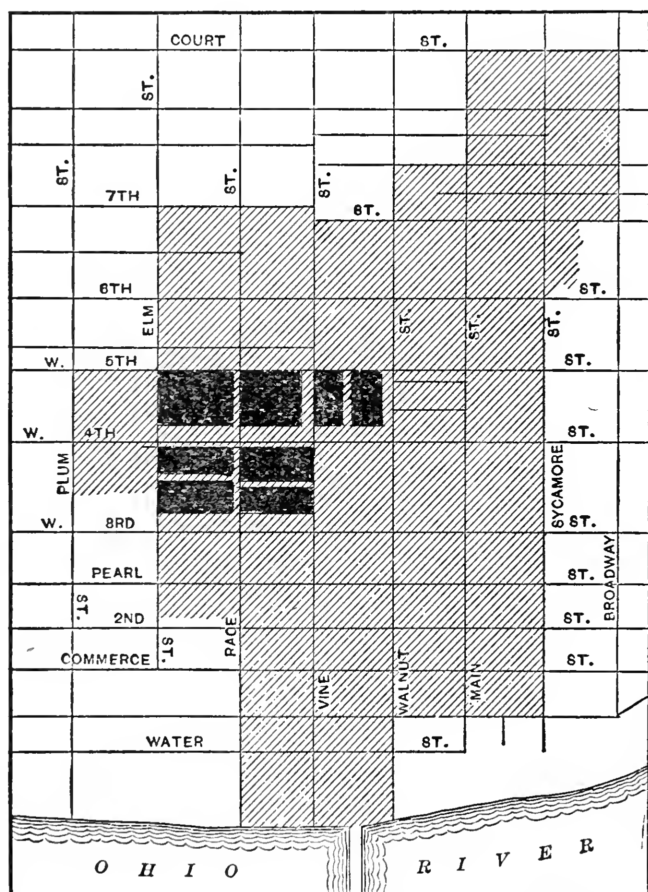
WHICH SPREADS LIKE A FAN FROM THE LEVEE TO RAMPART STREET, INCLUDING THE FAMOUS CREOLE QUARTER AND THE OLD PICTURESQUE PART OF THE CITY

a quarter of a mile off Elliott Bay and is 17 blocks long and from 3 to 5 blocks wide. Its centre is at the intersections of First, Second, and Third avenues and James, Cherry, and Columbia streets. Along Second Avenue and the central part of First Avenue are the principal retail stores, office buildings, and hotels. There are fifty-six buildings six or more stories high.

"The steep grades across the district," says the report, "cause the buildings to be

one to three stories higher on the downhill side and give a stepped-up effect, facilitating the spread of fire up the hill, which is about the direction of high winds."

Seattle has as many high winds as any city in the United States. Forty-mile gales occur there seven times a year. The prevailing direction of these winds is northwest. A fire starting in Occidental Avenue in time of high wind could easily sweep the entire business section and scatter brands for a mile over the city. While



"CONGESTED VALUE DISTRICT," CINCINNATI IN WHICH THE FIRE DANGER IS GREATEST ON FOURTH STREET NEAR THE INTERSECTIONS OF VINE AND ELM

the city proper has a fair water supply and a fairly efficient fire department, Ballard and Fremont are not well protected, and practically no essential precautions are taken against dangerous fires in these lumber districts. Of the fifty-nine big fire losses in 1910 and 1911, fifteen came from lumber yards and wood-working plants. One of these was at Waters, Mich., and another at Marinette, Wis. Had either taken place in or near a big city, the loss might have been the city.

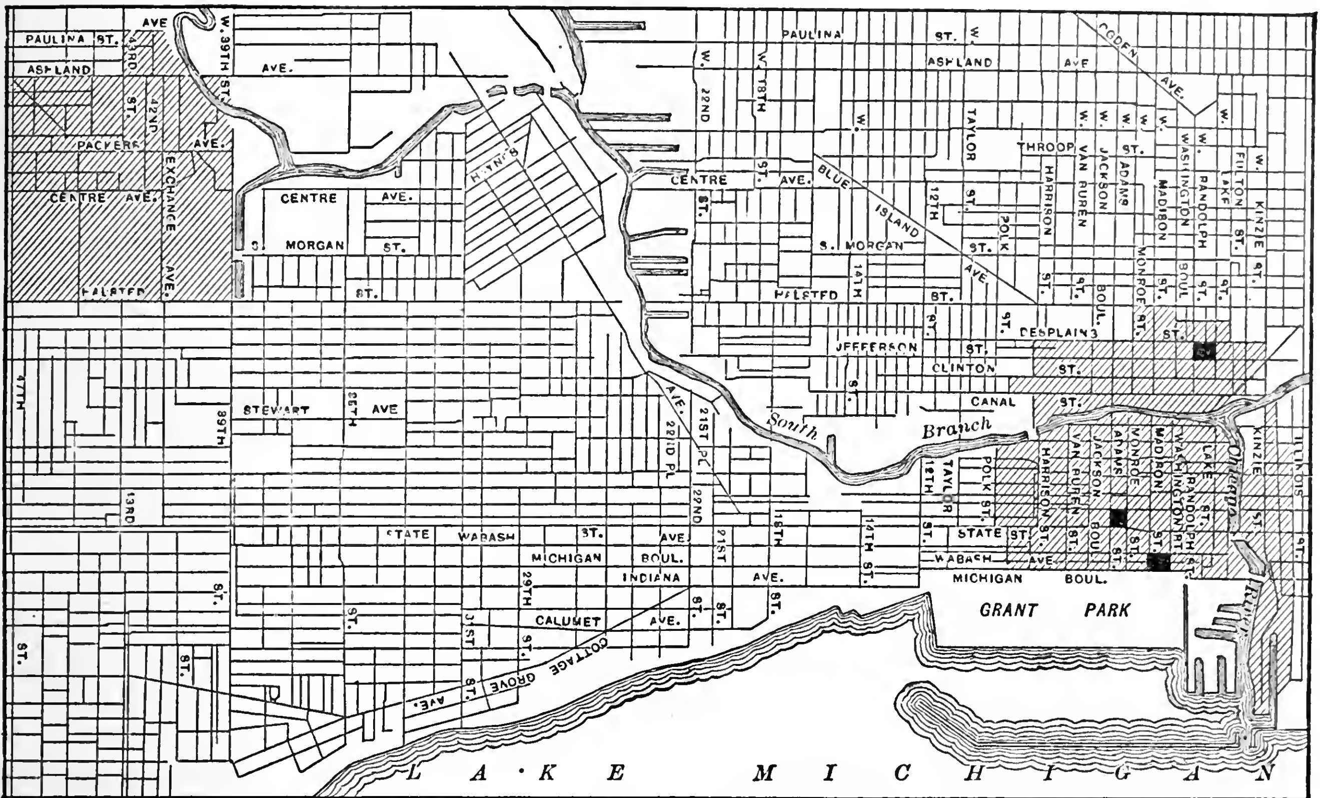
Boston to-day presents the greatest conflagration hazard of any large city on the Atlantic seaboard. The centre of the congested value and conflagration district is along Washington Street, a narrow, winding way of department stores and office buildings, off which run many other narrow streets and alleys, built up with inaccessible high-storied fire-traps. The blocks between Washington and Tremont are the worst of many bad blocks. In general, the blocks through Washington from Boylston to Merrimac are bad.

Many reports have been made on Boston. The Chamber of Commerce fire prevention committee, with Mr. Clarence H. Blackall as chairman, issued a recent report recommending a high pressure water service, the creation of a bureau to investigate the causes of fires and to locate the responsibility as a coroner's jury investigates a crime, and, finally, the passage of ordinances compelling the installation of sprinkler systems in dangerous buildings.

"If a certain high-storied, frame-joisted, brick firetrap on Market Street, in Philadelphia, ever gets going," said Mr. Henry A. Fiske, a fire engineer of authority and former Chairman of the National Fire Protection Association, "she'll throw her brands half way across New Jersey. That corner on which she stands is known to insurance men the country over."

This city, the first home of American fire insurance, occupies the unusual position of having a high potential hazard with a moderate probable hazard. Notwithstanding that her fire department has been classed as notably inefficient because of politics, she has had but two fires of any consequence, one in 1850 and one in 1865. A city of 1,600,000, her present loss per person per year is $1.37, with 3,878 fires. This low loss is attributed partly to brick construction throughout the city and partly to luck.

She has two distinct conflagration centres, the chief of which is in the poorly built business section. It lies in the east side of the neck of the bottle formed by the Schuylkill and Delaware rivers. Colored out on a map, the district rises tower-like from the Delaware to the City Hall. It consists of 306 blocks. Eighteen of them are highly hazardous and are zig-zagged



WHERE TWO BIG FIRE HAZARDS LIE IN CHICAGO

IN THE RETAIL AND WHOLESALE BUSINESS DISTRICT, AND IN THE STOCK YARDS ON ASHLAND STREET BETWEEN FORTY-SEVENTH AND FORTY-NINTH STREETS

from top to bottom, most numerous between Filbert and Walnut streets, along Eighth and Ninth streets. The minor conflagration centre lies a half mile to the north along the Delaware. It is bounded by the river, by Poplar, North Sixth, and Somerset streets. Here are found lumber storages, wood-working plants, ship yards, carpet, hat, paper, wood box, and knitting factories.

Mr. Powell Evans, a wealthy and progressive citizen, is chairman of a fire prevention committee which was formed after the recent severe report of the engineers of the National Board of Fire Underwriters. Improvements are to be made in the fire and water departments and citizens are to be educated in fire prevention. It is a big job to fortify the city against fire. Water mains laid in 1804 and in 1817 must be ripped up before the fire comes along that will require a whole river of water to put out.

Somehow, one feels that New York is really too big to be burned up. Yet fire engineers have repeatedly predicted such a catastrophe.

A corps of engineers of the National Board of Fire Underwriters concluded an inspection of Chicago in July, 1912. This report calls particular attention to the inadequate water and fire department protection and to the congestion of inflammable, shingle-roofed dwellings, which themselves are a conflagration menace and which are constantly threatened by flying brands of a fire in time of high winds. Chicago has forgotten the big fire of 1871. Every year sees an increasing number of fires. The number was 5,513, with a per capita loss of $2.40, every year from 1900 to 1909. Last year there were 9,130 fires, with a per capita loss of $2.59. The lumber and frame stockyard districts constitute the most acute peril, because of the flying brand danger. Near the junction of Dearborn and Monroe Streets, the centre of the congested value district, is the most highly dangerous business block.

When Kansas City burns, the fire will probably start not far from Ninth and Delaware streets, this point being the centre of the retail stores, offices, and hotels and near the wholesale district. The conflagration district consists of 52 blocks, 12 long by 3 to 10 wide, bounded by McGee, Baltimore, Second, and Thirteenth streets.

A fair sample of the class of buildings in this district is a six-story general merchandise store, brick, with frame joists, on Delaware Street, full of inflammable material and without sprinkler system or other effective protection. Kansas City has no automatic fire alarm system; it depends wholly on telephone service. Late at night, early in the morning, or on a Sunday, when public and private telephones cannot be quickly got at to give a fire alarm, a fire, even if discovered, can get a fine headway here.

BOSTON, THIRD IN DEGREE OF PERIL

BECAUSE OF THE IRREGULARITY AND NARROWNESS OF ITS STREETS, THE MOST DANGEROUS OF WHICH LIE IN THE DISTRICT BOUNDED BY WASHINGTON, TREMONT, BOYLSTON, AND COURT STREETS

What has been said regarding the cities already named is true of countless smaller cities. Mobile, Ala., may some time become a victim of her inadequate water supply, or of the inherent and neglected dangers in her buildings. In Lawrence, Mass., graft and politics are increasing the fire menace. Like many other mill towns it has maintained a low fire loss, in spite of a high potential hazard, because of the fire prevention lesson learned from the mills. Her fire centre is along Essex Street, between Broadway and Newbury Street. Hartford, Conn., a fire insurance centre, has a high potential hazard with 26 bad blocks.

There is a way by which the cities may get rid of their burden, which amounts to a general per capita fire tax of about $2.75 per year of which the insurance companies merely act as the tax gatherers; and this is by intelligent organization.

Thirty years ago the most hazardous risk was that of the cotton mills of New England. Fire insurance premiums became prohibitive to carrying on the business. The mill owners organized the New England Factory Mutual Insurance Companies and set to work to *prevent* fires by watchfulness. Although their mills are still of wood, their loss is one thirtieth what it was formerly and is now the lowest of any kind of construction in the United States. They have a fire college connected with the Massachusetts Institute of Technology in which fire causes and the prevention thereof are studied and taught.

To-day any individual mill or factory owner may apply for information at this college and learn how to protect his business. Other insurance companies have followed the example of these mill men of New England, and to-day individuals may apply for help at the National Fire Protection Association in Boston, or at the Underwriters' Laboratories in Chicago. A city may apply at the National Board of Fire Underwriters, in New York, and get the help of an engineer to show it how to organize to prevent fire. In nearly every large city there is now also located a fire prevention bureau, maintained by the insurance companies as rate adjusters and as sources of information. The owner of house, building, or factory is told that his rate is so and so, but that if he will make certain improvements in the way of fire prevention — such as the installation of sprinkler systems, automatic fire alarms, and fire pails — his rate will be lowered.

A very definite prevention programme is

being carried out among the cities of Ohio, through the medium of the state fire marshal. This programme includes rigid inspections of all dwellings and business houses every month by members of the fire departments, instruction in the chemistry of fire in the public schools, and rigid building laws, including the power to condemn old fire-traps which menace the conflagration districts. This office was created by the legislature in 1900 and since that date the fire loss in the state has been slowly decreasing. In 1901 it was $11,196,189. It is now slightly in excess of six millions. The law is far more rigidly applied than in New York State, every month from two to three hundred buildings being ordered torn down in such cities as Cleveland. Toledo, Cincinnati, and Dayton. John W. Zuber, the state fire marshal, is also carrying on a campaign of educating the public not to start fires. He makes close investigation into fires of suspicious origin and yearly secures nearly a hundred convictions for arson. Michigan and Wisconsin are slowly following the example of Ohio.

There is a way to solve the conflagration problem in a measure, a way that is recommended as the essence of their experience by such experts as Franklin H. Wentworth; Henry A. Fiske; Prof. Ira H. Woolson, a Columbia University engineer, now building-code expert of the National Board of Underwriters; W. H. Merrill, of the Chicago Underwriters' Laboratories; and W. D. Mathews, of the Chicago Board of Underwriters.

A BIG FIRE ON THE WATERFRONT IN BROOKLYN

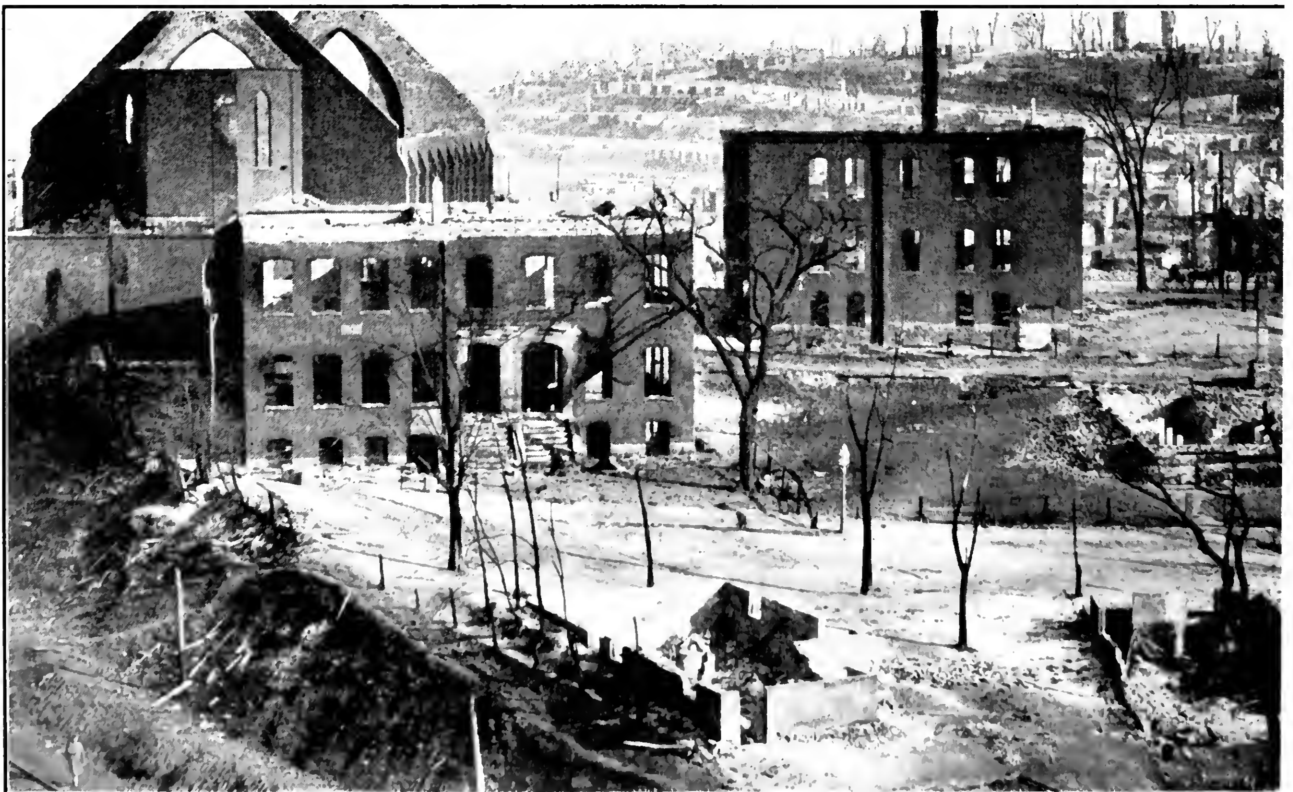
A BLAZE OF THE KIND WHICH, UNLESS PROMPTLY CHECKED, EASILY DEVELOPS INTO A CONFLAGRATION THAT MAY DESTROY A WHOLE CITY

THE GREAT FIRE IN SAN FRANCISCO IN 1906,

THE RUINS OF BALTIMORE

In the heart of every danger zone there are streets crossing at right angles, lined with buildings at least of brick if not of stone or concrete. Upon the map these blocks form a more or less complete Maltese cross. These buildings are valueless as a fire stop because of their thin glass windows and wooden frames. At Baltimore and at San Francisco such buildings were easily attacked, the fire breaking out the thin glass and converting every structure into horizontal flues.

The city that will trace out this Maltese cross from its central danger zone and equip the buildings with metal frame

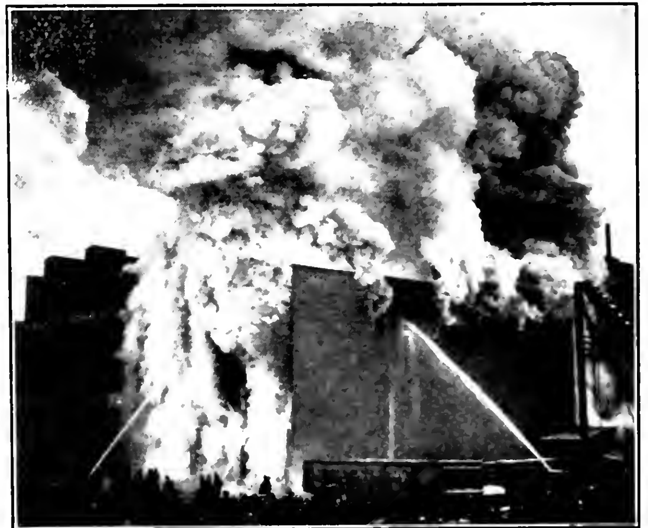


WHAT FIRE IS LIKELY TO DO IN EVERY AMERICAN CITY,

CAUSED BY THE FAILURE OF THE WATER SUPPLY

windows and wired glass will at once possess the equivalent of substantial fire walls, thus protecting each of the four centres one against the other. Buildings in each section may protect themselves one against the other by the same inexpensive yet strategic procedure. Wired glass, it has been repeatedly proven, withstands the hottest fire.

By following this plan much will be done to eliminate the conflagration hazard of the cities. Wired glass not only keeps fires out but it keeps them in, and fires can thus be made unit fires, to be held in check until extinguished by the firemen.



A DANGEROUS FIRE IN DULUTH

HERE ILLUSTRATED BY THE DEVASTATION OF CHELSEA, MASS.

THE ASSUAN DAM

A MIGHTY STRUCTURE THAT ADDS MILLIONS OF ACRES TO THE ARABLE LAND OF EGYPT

BY

M. E. J. CZARNOMSKA

BY SHAPE and conditions, Egypt offered herself to not only the most compact system of irrigation in the world, but the most spectacular. As the Great Assuan Dam now stands completed, one must recognize that she has achieved it. It stirs imagination, even emotion. The dam that stores the water, the barrages that distribute it, the lesser weirs and sluices of the large canals with their offshoots that traverse the provinces — all are on an enormous scale, one great work to water a valley to feed a nation.

Three miles above Assuan the Great Dam stretches a mile and a quarter from bank to bank across the Nile. This year's flood is over. The brown water has rushed through to spread upon and fertilize the fields. Now the sluices are closed, and the gigantic bulwark, apparently a solid mass, towers nearly 80 feet above the river. Behind it the lake — 111 miles long when first formed ten years ago, now to be extended by 40 miles — is filling. It will store 2,000,000,000 tons of water for use next spring. The overplus will escape by the navigation channel till the gradual opening of the sluices in the dry season. Three magnificent barrages: at Esneh, 100 miles north of Assuan; at Assiout, 275 miles farther north; and a third, 260 miles farther still and twelve below Cairo

AN EGYPTIAN IRRIGATION DYKE

BROKEN TO LET THE WATER THROUGH TO A LOWER LEVEL AFTER THE UPLAND HAS BEEN IRRIGATED

(where the Nile divides to cross the Delta) will distribute this water as it issues from the dam by holding it back till the canals of the provinces are filled. The vast structures, massive, simple, built solely to sustain the pressure upon them, accord wonderfully with the sober external aspect of the temples that neighbor them.

With the first opening of the dam in December, 1902, science took under absolute control the "life, strength, and prosperity" of Egypt. In no other country do these depend upon a single agent. In Egypt, the Nile alone sustains the land it has created. The White Nile, the outlet of Lakes Albert and Victoria, after a tumultuous course near the equator, filters lazily for six hundred miles through the reeds and grasses of broad swamps, with the slightest slope a river can have. It comes to Khartoum free of silt, with the milky tinge that gives it its

THE SLUICES OPENED AT ASSUAN
TO RELEASE EXCESS WATER FROM THE RESERVOIR ABOVE

INCREASING THE HEIGHT OF THE ASSUAN DAM BY 16 FEET
TO ENLARGE THE ALREADY IMMENSE RESERVOIR SO THAT IT WILL HENCEFORTH CONTAIN 2 BILLION TONS OF WATER, MAKING A LAKE 151 MILES LONG

A GLIMPSE OF THE MODERN
WHICH WILL BE VASTLY EXTENDED BY THE NEW
ENLARGED ASSUAN DAM, UNDER THE

THE ANCIENT WATER-GAUGE OF THE NILE

name. Here it is dammed back for several months by the rush of the Blue Nile, and forms a vast reservoir. Not until October, when the force of the Blue Nile is spent do its resources come into play. Thenceforward till the next flood, its full and constant flow alone makes Egypt habitable.

But the ancient system of irrigation, that had worked well under a despotism with serf-labor, could not meet the demands of modern industries, nor enable Egypt to compete with western nations. Mohammed Ali, the ambitious pasha of Egypt from 1803 to 1848, tried to introduce scientific irrigation; but the barrage he built below Cairo soon cracked from the foundation up and was abandoned. His grandson, Ismail, introduced the raising of sugar-cane, which requires much water. He provided for it in the old way by cutting another big canal, which was soon clogged and could only be cleared at enormous expense, or by forced labor.

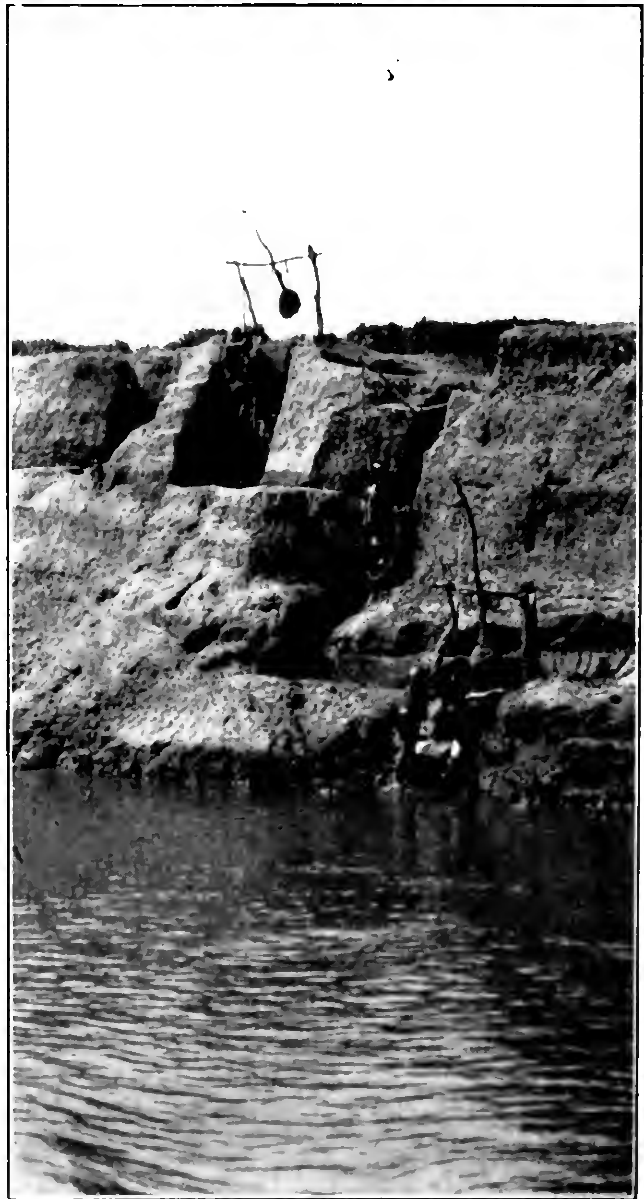
In 1882, however, England took the responsibility for the future solvency of Egypt. Her first care was the water-supply. By 1890, Mohammed's barrage was repaired and in use, and much of the old "basin irrigation" modernized. It

EGYPTIAN IRRIGATION SYSTEM

STORES OF WATER THAT WILL BE HELD BY THE SHADOW OF THE PYRAMID AT THE LEFT

was soon evident that enormous power was going to waste for lack of a reservoir to store the water that ran fruitlessly into the sea by millions of tons per hour in winter, leaving the land to gasp for it in summer. Therefore a dam was planned, and at the same time a second barrage at Assiout to provide for Ismail's ill-starred canal scheme.

The building of the barrage was comparatively simple, but that of the dam presented enormous difficulties. From December to June the river divides at Assuan into five channels. The masonry in each was built up separately in the successive dry seasons by a force of from 11,000 to 13,000 men. The difficulty lay in the building of the preliminary construction-dams. Even the reduced current tossed a 5-ton block along as if it were a football, broke through the temporary dams and carried away the car tracks, steam-cranes, and car-loads of stone upon them. Still, in spite of drawbacks, the dam was finished within contract-time. Its storage capacity of 1,000,000,000 cubic metres (tons) provided fully not only for the valley and the Delta, but for the irrigation of 420,000 acres south of the dam, hitherto barren.



AN OLD METHOD OF IRRIGATION

And then, as everything worked happily for five years, it was resolved to double the capacity of the dam; that is, to realize the plan first proposed: namely, *to store the full amount of water possible without injury to navigation.* The lake would be 23 feet deeper; the wall, 16.4 feet higher, the difference to be taken from the "free face" above high-water level, formerly unnecessarily high. Also, to complete the whole system of water supply, another barrage was contracted for at Esneh to provide for the large province of Keneh. It was finished in 1909, while the additions to the dam were in progress.

THE LOCK IN THE DAM OF THE NILE AT ESNEH

THE VESSELS DRIFT INTO THE LOCK STERN FOREMOST AND ARE WHIRLED ABOUT BY THE EDDIES SO THAT THEIR BOWS ARE DOWNSTREAM WHEN THEY COME OUT

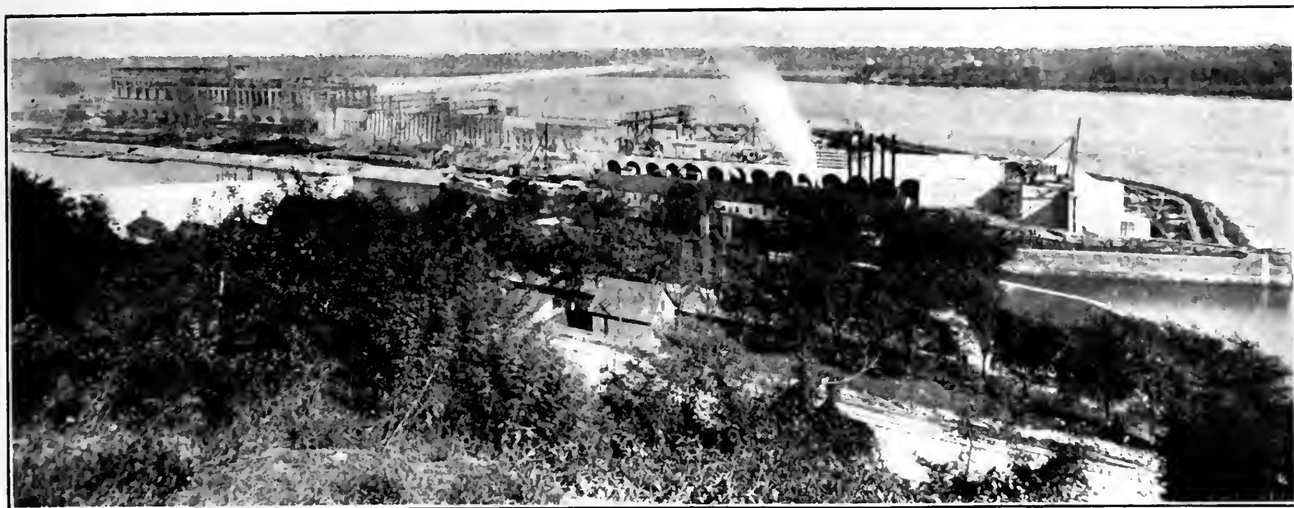
These were apparently a simple matter; only to remove the northern facing and build up the masonry at a larger angle. The casual observer could see no more. But the wall was greatly broadened and strengthened; and a new lock was added to the four already in place.

Then the day after Christmas, 1909, the Delta barrage, without warning, shivered and cracked. A half hour later, part of it fell.

The case was serious and had to be seen to in hot haste. The method was drastic. New foundations were dug and laid in solid land west and north of the old, at the sacrifice of part of the beautiful Public Gardens. And the distribution of the pressure over the present vast wall-surface makes it entirely stable.

A million acres won from the desert will soon be under cultivation in Nubia. A large part will be for cotton; Egypt is already the third cotton-producing nation; she may soon be the second. The rest will be mostly for sugar-cane. Immense sugar factories are at work all along the Nile, and sugar-cane has become the chief luxury of the natives.

A perennial water supply for Egypt seems now assured. But the price will be eternal vigilance.



THE GREAT MISSISSIPPI DAM

THAT WILL MAKE THE RIVER DEVELOP 200,000 ELECTRICAL HORSE-POWER

BY

HARRY BRISTOL KIRKLAND

THE greatest hydro-electric power plant in the world is now being built on the Mississippi River between Keokuk, Ia., and Hamilton, Ill. The plant will have 30 water-wheel units of a total capacity of 300,000 horse-power, and it will be capable of delivering 200,000 horse-power to its customers. In spite of the low cost of coal in this region, the Mississippi can create this enormous horse-power more cheaply than it can be made by steam.

The generation of this power was conceived more than half a century ago. Gen. Robert E. Lee, when a lieutenant in the army, was stationed near Keokuk. He made a report on the water-power that could be obtained from these Des Moines Rapids of the Mississippi, though as a practical engineer he knew that the time had not arrived for its utilization.

But the people became interested and have kept eternally at it. They talked and planned about the project for years. Various promoters appeared, raised their drooping hopes, and then disappeared. Finally a promoting corporation was organized by prominent citizens of surrounding towns to obtain the rights needed to promote the project and to secure an engineer and money for the work. The city councils of Keokuk and of Hamilton appropriated public money, by unanimous consent of the citizens of the two cities, to this promoting organization. This money was later paid back into the city treasuries.

The promoters got the necessary permission from Congress to dam the river and then were ready for an engineer. They let their wants be known, and there was no lack of applicants for the job. Among others came Mr. Hugh L. Cooper. When they intimated that they would like to be shown that he knew how to build a dam he got a private car and took them to Niagara to show them what he had done there.

They were convinced. So they got an engineer whose ingenuity has conquered structural difficulties, and whose enthusiasm, persistence, and convincing personality have secured the coöperation of those who could command the very large amount of money necessary for the carrying out of the plans.

Standing on the high bluffs on the Iowa

THE GAP BETWEEN THE COFFER-DAMS

THE NARROW SPACE THROUGH WHICH THE MAIN CURRENT OF THE MISSISSIPPI RIVER, AT KEOKUK, IA., FLOWED ON JULY 20, 1912

side of the Mississippi River at Keokuk one sees a valley two miles wide, more than half covered by the waters of the river. The west bank of the river is lined by the Burlington Railroad and the Des Moines Rapids Canal. This canal was built in the 'seventies to enable the river boats to pass the treacherous rapids. When the new dam is completed, this canal will be submerged beneath the lake which will form above the dam and a single lock will take the place of the three now in use on the old canal. The high bluffs on either side close to the banks, the solid bed of rock, and the comparatively steep slope in the bed of the river for twelve miles above the site, make it the most advantageous place along the Mississippi for the construction of a dam.

The plans for the power house provide for the instalment of thirty mammoth generators of 10,000 horse-power each. Each of the generators of electric power will be impelled by a turbine water-wheel. These 10,000 horse-power units are the largest ever built, and the weight of the machinery in each will be about 400 tons. The water, in imparting the energy to the 30 turbines, will pass through openings in the base of the power house and drop about 32 feet. Through each of these openings 165 tons of water will drop every minute, and impart the enormous energy of this falling weight to the turbine water wheels. The power house building stands in the river bed and forms a part of the great dam itself. The building is one third of a mile long and 132 feet wide. Its height from the bed of the river is more than 170 feet, or equal to the height of an ordinary building of fourteen stories. Besides the power house the main structures of the work are the dam, the lock, and the dry dock.

The dam — nearly a mile long — is one of the longest in the world. It has the appearance of a concrete bridge built with piers spaced at rather short intervals and spanned with arches. In reality it is a bridge with the dam built underneath it so as to fill the 119 spaces between the piers. The waste water will flow over the dam, under these arches; and steel gates, suspended from the roadway of the bridge, will operate in grooves on the piers to regulate the flow of the water over the dam.

The lock, which is being built by the power company, conforms to dimensions required by the Government. It is of the same dimensions as the locks being built by the Government in the Ohio River, 110 feet wide and 400 feet long, and in it it will be possible to lift or lower boats forty feet. It will aid navigation considerably by providing for larger vessels than the old lock, and by shortening by more than two hours the time that formerly was required to pass the seven and a half miles of rapids.

The dry dock will be built next to the Iowa shore and alongside of the new lock. It will be the largest on the river and will accommodate any vessel which can pass the lock. Boats may enter it from the upper level and after the gates are closed the water will be let out into the lower level of the river below the dam, so as to leave the boat ready for examination and repairs.

The construction of this great plant within two and a half years is the striking result based upon forty years of constant endeavor to promote the enterprise and upon forty months of constant toil on the engineering blue prints. The endeavors of a few men over a very long period have resulted in plans for work which will be

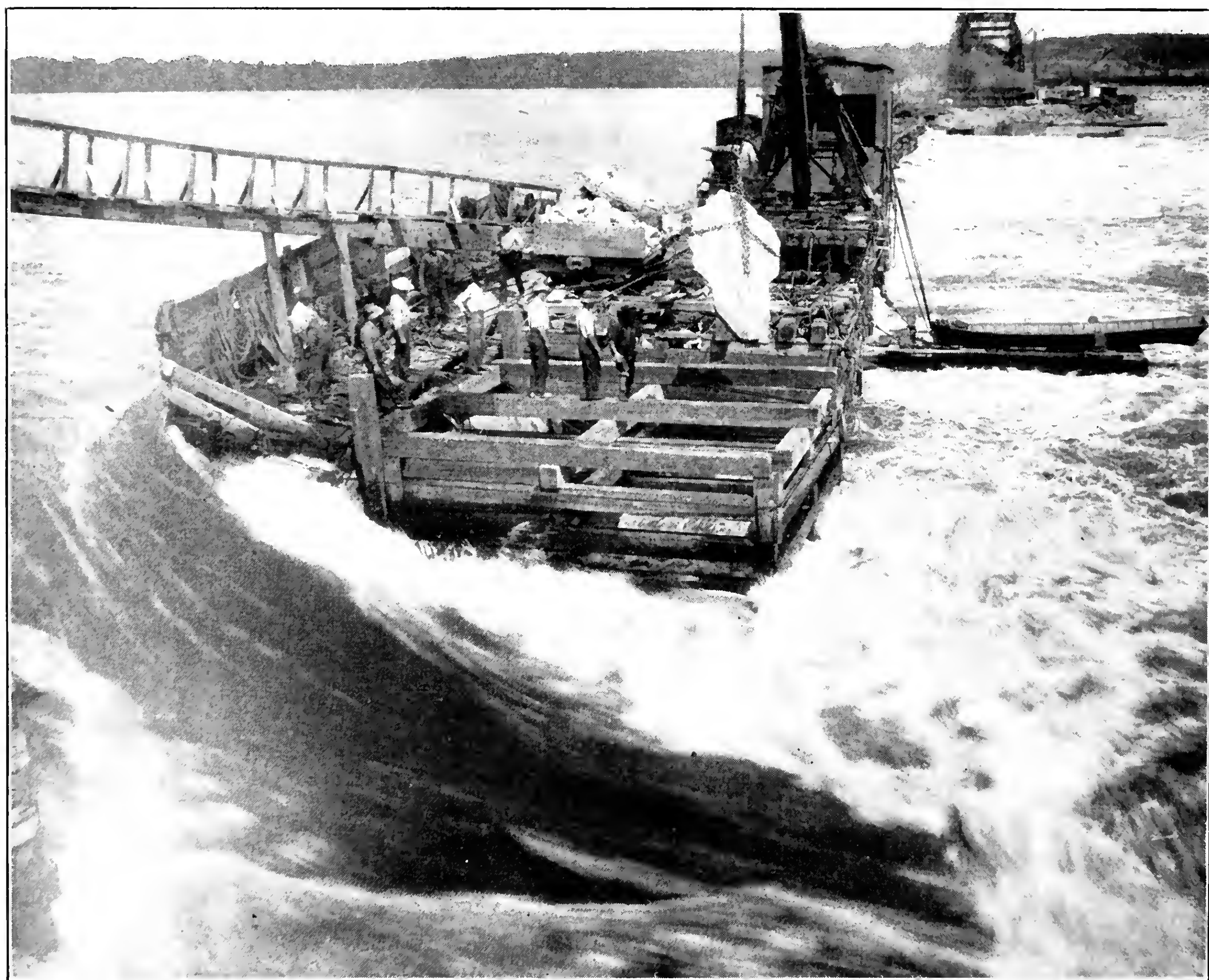
COMPLETING THE LAST SECTION OF THE COFFER-DAM

WHICH, AFTER WATER-PROOFING, ENABLED THE CONTRACTORS TO PUMP DRY THE RIVER BED DOWN-STREAM AND SO TO BUILD THE PERMANENT DAM AND POWER HOUSE

completed in a very short time. Fifteen hundred men in Mr. Cooper's efficient organization are doing things as they were planned, and on time.

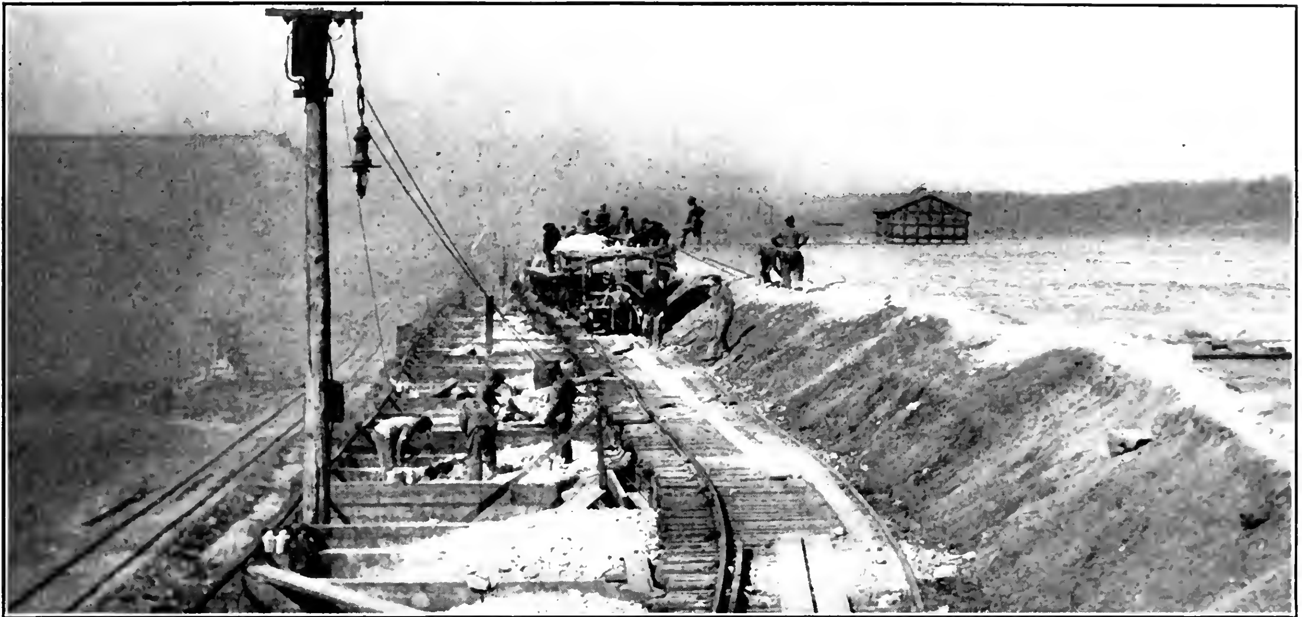
The general plan divides the hydraulic construction work into two parts — the Iowa Division and the Illinois Division. The Illinois Division has the construction of the dam and the Iowa Division cares for all the other structures. All the structures are being built on the bed of the river, which has made it necessary to keep the sites dry by enclosing them with coffer-dams. The coffer-dam for the Iowa Division enclosing all the structures in that division holds the river back from thirty-nine acres of its rightful bed.

Coffer-dams are often made by driving two rows of piles around the site of the work and by filling in the space between the piles with clay; but here the bottom of the river is solid blue limestone, and the driving of piles was out of the question. So the coffer-dam was built by setting cribs or large crates in a row, filling them with rock to hold them in place, and dumping clay along the outside face of the cribs to make a water-tight bank. After the coffer-dam was built a monster centrifugal pump was set in operation on the coffer-dam to pump the water out. Several days were consumed in continuous pumping and then the bottom of the river was exposed to view — a very level surface of limestone and an excellent foundation for the structures to be built upon it.



SINKING THE LAST CRIBS ON THE UPPER LINE OF THE COFFER-DAM

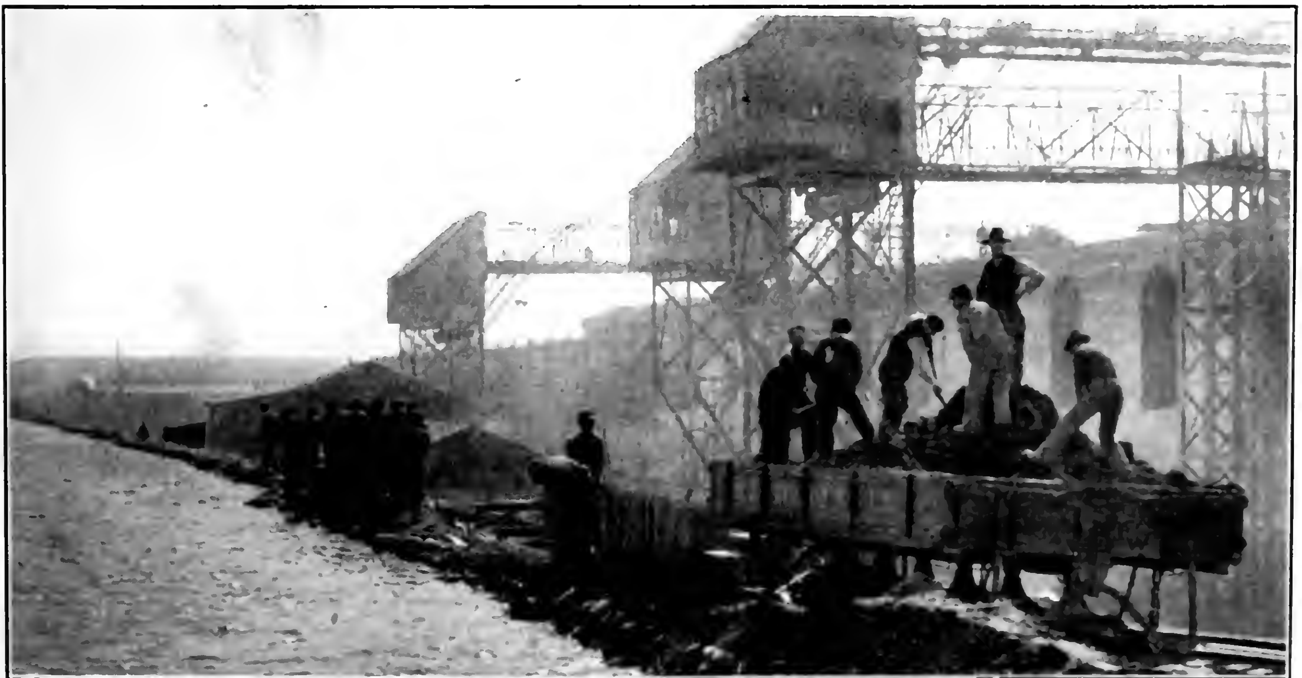
A million dollars' worth of tools and construction machinery has been collected within the coffer-dams. The construction plant is the largest ever used on a work under private ownership. It includes sixteen miles of railroad and sixteen standard-gauge locomotives. Nearly three hundred cars are required for hauling materials. Nearly ten million



THE BATTLE AGAINST FLOODS
A DYKE OF EARTH AND SANDBAGS BUILT ABOVE THE LEVEL OF THE CRIBS DURING THE SPRING FRESHETS LAST YEAR

feet of lumber was used in making the coffer-dam, all spent on necessary but temporary work that will have to be torn away before the plant is ready for operation. A large machine shop and power plant was erected to keep tools in order and to supply compressed air to operate the rock-drills, derricks, and engines of all sorts. This use of compressed air on a large construction job is a more modern method than the former one of using a small boiler to make steam for each engine. Nearly fifty miles of pipe are used to supply the compressed air.

The concrete mixing plants are built for great capacity. There are five large mixing-machines in the Iowa mixing plant and four in the Illinois plant. If worked to their capacity, these plants could turn out nearly three thousand cubic yards of concrete in a single day — enough to build an ordinary sidewalk eight miles long. The concrete is placed in forms or moulds built of wood to form the structure,



THE COFFER-DAM ALMOST OVERWHELMED BY THE SPRING RISE
RAISING AND STRENGTHENING THE DEFENSES OF THE MAIN DAM WHILE IT WAS UNDER CONSTRUCTION

THE MAN AND—

MR. HUGH L. COOPER (CENTRE) IS THE CHIEF ENGINEER OF THE COMPANY THAT IS BUILDING THE KEOKUK DAM. MAJOR MONTGOMERY MEIGS, AT HIS RIGHT HAND, IS THE UNITED STATES ENGINEER IN CHARGE FOR THE WAR DEPARTMENT

and after a few days the forms are removed, leaving a structure of solid rock.

The sand used in the concrete mixture is pumped from the bed of the Des Moines River by a large dredge, and is dumped on the shore to be loaded into cars and brought to the work. The rock is excavated from the bed of the river within the coffer-dam, so as to make a channel for the discharge water from the power house. Luckily the amount of rock to be excavated from this channel is almost equal to that required for all the concrete in the work. It is excavated by drilling and blasting and is loaded by a large steam-shovel upon cars to be transported to the crushing and mixing plant. After passing through the mixers, the concrete is carried in buckets on flat cars to the various points on the work where the forms or moulds have been prepared for receiving it. Here it is hoisted in the buckets by large derricks or cranes and discharged into the forms.

Special cranes are used for this purpose on the power house work. These cranes are simply steel bridges which span the power house site and are supported on steel legs which move on rollers. A small trolley car with a suspending hook runs on the bridge, picks up a huge bucket of concrete weighing several tons, hoists it into the air above the labyrinth of forms, carries it to a point above its destination, and lowers it to its place.

In the construction of the dam — which is carried on by a separate organization on the Illinois side of the river — the work is so laid out that the dam itself is used to support the machinery employed for its

—THE JOB

FORM WORK OF THE SUPERSTRUCTURE OF THE POWER HOUSE WHICH WILL SHELTER HYDRAULIC GENERATORS THAT WILL PRODUCE 200,000 CONTINUOUS ELECTRICAL HORSE-POWER FROM THE FALL OF THE MISSISSIPPI RIVER

continuous extension. Three tracks are laid on top of the completed portion and upon these tracks concrete and material trains run almost continuously. At the end of the bridge is a great crane with an overhanging arm that extends some distance ahead of the completed work. This crane picks up the buckets of concrete and carries them ahead over the new work and thus deposits the concrete in the forms. These forms are built of steel, for they are used over and over again on the one hundred odd piers and arches. The forms for the other structures are built of wood, as steel is economical only where many duplicate parts are required.

In planning this great work, it was recognized that the dangers of at least one winter's ice and floods would have to be contended with. The Father of Waters would not be placed in harness without at least one great fight. This would come before the structures could be brought up above the flood levels in the spring of 1912. The Iowa coffer-dam was built high enough to withstand the highest flood that had been recorded in thirty years. The coffer-dam for enclosing the work on the Illinois side of the river was built only high enough to keep out the water in ordinary stages. It was planned to allow this coffer-dam to be flooded, so as not to aggravate conditions on the Iowa side where property was at stake.

The floods of 1912 on the Mississippi River will long be remembered, for they reached the highest stages ever known to those who keep the records. At Keokuk, the great work was thrice threatened with destruction within three weeks — once by the enormous impact of the moving ice against the coffer-dam, once by a flood caused by an ice jam below the work, and finally by the regular spring flood caused by melting snows, heavy rains, and swollen tributaries.

THE COFFER-DAM RESISTING AN ICE JAM LAST MARCH

The ice in the Mississippi River usually breaks up in March or April, sometimes earlier, and it floats down the river in pieces four or five hundred feet square. The usual behavior of an ice floe is to crush and sweep out of its way anything which happens to be in its path. It was expected that such a floe would strike the upper end of the Iowa coffer-dam, and so this end was strengthened several

times, while the engineers awaited the coming of the ice. A large amount of rock was dumped into the water on the slope of the embankment in the hope that when the ice came it would push up on top of the coffer-dam and would fall back upon itself. The outer leg of the coffer-dam was exposed to the scraping action of the ice as it went by, and so this side was protected by buttresses built out at intervals into the stream. These were relied upon to break up the ice and to prevent a large field from scraping along the embankment as it went down the stream.

It became apparent in the middle of the winter that ice conditions were to be more serious than usual owing to the severe cold which caused the ice to freeze nearly three feet in thickness. The warm weather seemed somewhat late in arriving, making it more than probable that if the thaw came suddenly an enormous amount of ice would be released at once. In the anxiety of waiting extra precautions were taken. At the most exposed corner of the coffer-dam several more cribs were placed as buttresses. They were built to an extra height, armored with boiler plate, and heavily loaded with rock. A steam shovel which had been digging rock on the Illinois side of the river was brought over and placed in position to dig earth. Down in the quarry, within the coffer-dam itself, two steam shovels were kept ready to dig and load rock should this material be called for.

On the 23d of March a large body of ice broke away above the work and moved slowly downstream just far enough to lodge in the space between the Iowa and Illinois coffer-dams. In this five hundred foot gap the water was quite swift and had long since worn away its covering of ice, although the river was frozen both above and below the gap. The following day at two o'clock the ice above the dam broke away and came floating slowly down the stream. The advance floes soon reached the coffer-dam and, as had been anticipated, ice was forced up on the inclined embankment to such a height that it finally rolled backward upon the oncoming ice. Thousands of tons of ice were pushed up on the coffer-dam until it seemed that the river must surely win without further effort. But the ice began wedging itself through the passage between the Illinois and Iowa coffer-dams, where its passage was materially aided by the swift current. It finally became evident that the coffer-dam would withstand the shock, although extraordinary reinforcements were shown to have been entirely justified.

About four o'clock in the afternoon it was noticed that the water was rising very rapidly. In an hour's time the water rose to a point considerably higher than the coffer-dam had ever been called upon to stand. The cause turned out to be an ice jam in the river at Gregory, Mo., some five or six miles downstream. The ice had piled up so solidly for a distance of two miles that no water could find its way past the obstruction.

The situation at this time was very critical. The coffer-dam had been built originally to stand a stage of twelve feet of water. The back water caused by the ice jam brought the water up to a stage of seventeen feet before relief came. Men worked like beavers piling earth and sand-bags on top of the coffer-dam to keep ahead of the water and to stop all leaks. To augment the difficulties, the frozen bank of the original coffer-dam began to thaw beneath the water level, causing, every now and then, large masses of earth to break off and slide down out of sight into the deep water.

Relief from this flood came after the water had risen so high that it found a new outlet around the Gregory ice gorge. On March 26th the gorge at Gregory gave way and passed down the river. But the relief was only temporary. The upper river had scarcely cleared itself from the ice when the swollen tributaries began to pour their contents into the Mississippi. The story of the following two weeks is one of continued work in raising the coffer-dam with earth and rock and sand-bags. More than sixty-five thousand sand-bags were used. The men realized that once the water began to stream over the top the earth would be washed away faster than it could be replaced. The water finally rose to a stage of seventeen and

eight tenths feet. With the water at this stage, a storm brought about the climax of the situation. The storm came up suddenly on the night of April 7th, and in a very short time the waves were furiously dashing against the thin wall of earth and threatening to crumble it at any moment. There were on duty at this time only about fifty men. Messengers were sent for help and one hundred men were routed out of their beds. They turned in with a will and covered the entire bank with bags of sand. The night was dark and the work was difficult. Some of the men were drenched to skin with the icy water. But when daylight came the storm subsided, and the river had begun to fall.

So the fight with the river was won. The work has now progressed to a point where no damage will be done. This winter's ice will lie in a lake of comparatively still water and will not break up, but will melt away under the rays of the sun. The spring floods of the coming years will pass over the spillways of the dam, and in July of the coming year the Father of Waters will submit to the work which has been laid out for him.

The work that has been laid out is to distribute the power to the cities and towns along the river in two long transmission lines, one north and one south from Keokuk.

One line is up the river through Fort Madison, Burlington, and Muscatine to Davenport, Ia., and the other is down the river nearly 150 miles to St. Louis. In the four towns along the northern line there are about 100,000 people. The population of St. Louis is nearly 700,000, and the public utilities company there has contracted to take 60,000 horsepower, or a little less than a third of the continuously available amount.

Northeast of Keokuk 220 miles is Chicago; a little east of south and nearly 150 miles away is St. Louis. Southwest of Keokuk about 175 miles is Kansas City. The country between is thickly settled, but as yet is not a manufacturing country. It has transportation a-plenty, but no cheap power. The Mississippi is its natural source of power and the great dam at Keokuk begins a new era in that region. The change will not be immediate, for such changes rarely are, but the possibility is there now and the actuality will in due course of time follow.

In the meanwhile, the Father of Waters has been dammed and his power transformed to human good, to turn the wheels of progress in a country already rich in agriculture which needs the supplementary development of manufacture. Potentially the dam has the effect of a coal mine at Keokuk. In the years to come it will be as economically important, to that part of the valley, as it is now spectacular.

THE GRAND OLD MAN OF WISCONSIN

HOW GOVERNOR HOARD BROUGHT CATTLE TO THE STATE AND SAVED IT FROM THE POVERTY OF ONE CROP

BY

FRANK PARKER STOCKBRIDGE

BY CHEESE FACTORIES and creameries they direct the stranger in rural Wisconsin, for cheese factories and creameries are the most striking landmarks of that country. His most striking impression is that the entire landscape of Southern Wisconsin is as picturesquely suggestive of dairying as the skyline of Pittsburgh is of the steel industry. As no picture of a rural scene in Holland is complete without a windmill, so no picture of rural Wisconsin is truthful unless it shows the round tower

at the end of the barn — the silo, infallible symbol of the dairy farm. And in the foreground of this picture are always the cows — tens of thousands, hundreds of thousands of them. There were nearly one million five hundred thousand cows in Wisconsin when the census of 1910 was taken, and it is because of these million and a half cows that the 2,333,860 human inhabitants of the commonwealth are perhaps the most prosperous farmers in America.

A SIGNIFICANT EXAMPLE

If Wisconsin held its enviable position only because of nature's bountifulness, its story would not have any great significance for other states less favorably endowed. But the truth is that almost any state can become agriculturally prosperous in the way in which Wisconsin has become prosperous. Wisconsin has been taught good farming. Mr. William D. Hoard laid the foundations of the doctrine there. Elsewhere, the Government, an individual, a railroad, the farmers' granges, or any organization or person whose interest it is to have the countryside prosper, might start the teaching.

It is a story as old as Abraham that wheat robs the soil and that cattle drop fatness. Wisconsin used to be almost exclusively a grain state, and in the early seventies, after many years of robbery, the yield had dropped to an average of eight bushels to the acre. These were lean years, for little but wheat was grown.

MEASURING BUTTER BY THE TON

Now they measure the annual butter crop of Wisconsin by the thousand tons — 105,307,357 pounds of butter made in a single year in the 1,005 creameries that dot the map almost as thickly as the stars dot the sky. And the cheese factories are even more thickly sprinkled — like the stars in the "Milky Way"— 1,928 of them, which turned out last year 145,171,035 pounds of cheese. In the southwest corner in the hill country, where the immigrants find the nearest resemblance to their native mountains, are the Swiss cheese factories, producing a larger annual output of this particular variety than comes out of Switzerland itself. Over in the east, around the shores of Lake Michigan, are grouped the German settlers, and here are the Limburger and brick cheese factories. And scattered throughout the state are the establishments in which are made the yellow American Cheddar cheese that is so common.

Under the domination of this dairying idea, Wisconsin has also developed wonderfully in the breeding of dairy cattle. It has long been the boast of old Holland that it possesses a cow to every inhabitant. In Jefferson County, Wis., a section of country twenty-four miles square, there are 36,000 people and 40,000 cows. There are fifty creameries, five condensaries, and six or seven cheese factories. The annual value of the milk produced in the county is $2,500,000. The annual sales of young dairy stock amount to nearly $800,000. These are the calves that are sold to dairymen elsewhere, without diminishing the value of the herds remaining at home. Besides dairy products, the county produces large quantities of beef, hay, and grain, and its total agricultural product is nearly six million dollars. The dairymen alone have more than two million dollars in the county's banks, and the values of their farm lands are increasing.

WILLIAM DEMPSTER HOARD

The man who started the change was William Dempster Hoard, dairyman, editor, at one time Governor, and preacher of the prosperity of good farming.

He began to be of signal service to Wisconsin in 1872, when he issued the first call for the formation of the Wisconsin Dairymen's Association. At that time he had behind him his youthful experiences in the dairy business in New York, three years of work in the Wisconsin wheat fields, a very creditable record of service in the Fourth Wisconsin Regiment during the War, a disastrous venture into the nursery business, beginning of a small country newspaper, and an entrance into politics. He had a political appointment at Madison and there he met the dairymen.

The dairy business in Wisconsin did not amount to much at that time, but the

seven men who responded to Mr. Hoard's call made a beginning. He was elected secretary of their organization.

He constituted himself a committee of one to do active missionary work. He went into the various school districts and held meetings in the interest of his propaganda, his only recompense being the slight increase in prestige and circulation which this gave his paper. By this means he succeeded at length in organizing several cheese factories, as this proved to be the easiest first step along the line of coöperation. As a result, the making of cheese increased until it reached the proportions of a staple in the state. In three years this production reached three million pounds annually, and the local market could not take care of it all. At that time it cost two and a half cents a pound to ship cheese from Wisconsin to New York City in ordinary freight cars, which meant a loss in hot weather.

MAKING A FREIGHT RATE

In 1874, therefore, Mr. Hoard induced the association to send him to Chicago to see what he could do toward securing better facilities and a reduction of the freight rates on cheese from Wisconsin to the export markets at New York, Boston, and Philadelphia. He spent two days in Chicago with not the slightest success, which convinced him that the men in charge of the railway freight business lacked an understanding of the commercial possibilities of the dairy business.

Discouraged and sick at heart, he made his way at the close of the last day to the office of Mr. W. W. Chandler, of the Star-Union Refrigerating Transportation Company, the pioneer in the enterprise, then just new, of cold-storage transportation. With slight hope of success, Mr. Hoard spoke his piece with some asperity, vexed in advance at the usual rebuff which he expected to receive.

"I represent," said he, "three million pounds of cheese seeking a safe, quick, and cheap transportation to New York City. What are you going to do about it?"

Mr. Chandler looked up slowly and said, "Who are you?"

"I am W. D. Hoard, secretary of the Wisconsin Dairymen's Association," was the reply.

"And what do you want?"

"We have organized a dairy board of trade at Watertown," answered Mr. Hoard. "Our people are ignorant of your methods and need your help. I want you to send one of your cars to Watertown and come yourself and explain it. Then I want you to make a rate of one dollar per one hundred pounds of cheese in iced cars from Wisconsin to New York, Boston, and Philadelphia."

The audacity of the Wisconsin farmer-journalist caught the business man's attention.

"Is there anything else?" he asked.

"Not now," replied Mr. Hoard. "But Mr. Chandler, if you do this it will put millions of dollars into the coffers of your company. It will clear out the clogged channels of communication and enable us to get into touch with the export demand for cheese to Great Britain, of which New York State now holds a monopoly."

Mr. Chandler asked a few more pertinent questions and then said, "I'll be there."

He was as good as his word. There were present at the meeting representatives of not more than fifteen cheese factories from different parts of the state, but at that meeting an agreement was entered into which placed Wisconsin cheese on a competitive basis on the Atlantic seaboard.

AN INTERNATIONAL MARKET

The production of cheese in Wisconsin took a wonderful jump. Within ten years, more than five hundred cheese factories were added to the list, and thousands of farmers bought cattle and turned their attention to dairying. Through the personal efforts of Mr. Hoard, the shipping facilities were further improved and trade relations were effected with London, Liverpool, Glasgow, Manchester, and Bristol. The young New York cheese maker's dream was beginning to be realized.

From then on the dairying industry advanced rapidly in Wisconsin. In 1876, at the Centennial Exposition at Philadelphia, Wisconsin cheese took the prize over the entire country. In 1878, at the International Dairy Show, held at the

American Institute in New York City, where dairy products were brought together in competition from all parts of the world, a Wisconsin girl, Fanny Morley, of Baraboo, won the international grand prize for butter.

In the early '80's, after the Wisconsin farmers had demonstrated their ability to produce cheese, the first effort was made in the creamery production of butter at Beloit. An enterprising produce dealer persuaded a number of farmers to churn butter and sell it to him unsalted, allowing him to salt, work, pack, and ship it uniformly. This business proved successful, and the farmers were quick to grasp its significance. They saw that the cheese factory system might be applied with equal success to butter making, with the additional advantage that the by-product of skim milk was of much greater value than the whey from cheese, as a food for calves, pigs, poultry, and other young stock. Thus the creamery came into vogue in Wisconsin thirty years ago, and it has grown very steadily and substantially ever since.

Meanwhile, the propagation of dairy knowledge was being steadily carried on by the association. They held conventions frequently in various parts of the state, where large numbers of farmers gathered and listened for three days to discussions by the best experts available in all branches of dairying. This was the father of the Farmers' Institutes, which have since spread to all parts of the country; and much of the extension work and other elements of the Western agricultural colleges had their origin in the methods of the Wisconsin Dairymen's Association.

This body of men, in fact, had a truly remarkable influence on the industrial and agricultural development of the state. Since 1872 they have held together, active and progressive, actuated by a single purpose, and avoiding all bickering and politics. The present state of Wisconsin stands as the fruit of this blossoming. The annual dairy product of the state now exceeds one hundred million dollars, and it has become the largest cheese and butter producing state in the Union, not excepting New York, though only one half of its territory is as yet in the hands of the husbandman.

Mr. Hoard's connection with this great movement was constant and vital. In 1885 he found it impossible to treat adequately of dairying in his little country paper, so he started *Hoard's Dairyman*, at first a modest sheet of four pages. Through the columns of this journal he continued to preach his agricultural doctrines, and with the spread of his ideas came growth and prosperity to his publication. It now has a circulation of 70,000, including subscribers in Europe, India, Japan, and South Africa, and is recognized as the world's leader in dairy thought.

A DAIRYMAN GOVERNOR

In 1888 Mr. Hoard, then probably the best known man in Wisconsin, was elected Governor of the state.

Five years ago he was appointed a member of the State Board of Regents, and was elected president of the Board. For four years he served in this capacity, devoting much of his time and attention to the development of the Agricultural College at Madison, until his failing health forced him to resign in 1911. Up to the present time Mr. Hoard has been able to remain actively at the head of his paper and to pay attention to his farm, though his seventy-six years admonish him to relinquish work.

His farm is carried on with his publishing business. Its 253 acres are devoted to the breeding of pure-bred Guernseys the growing of alfalfa, in which Ex-governor Hoard was a pioneer twenty years go, and the study of problems of soil fertility. It is conducted as an adjunct to the paper. But Hoard's Dairy Farm is more than an adjunct; it is a demonstration of what can be done by intelligent methods on run-down soil, and it is an interesting story in itself.

This farm, like most of Southern Wisconsin, was originally rich in natural plant food and produced wheat in abundance. But its owners abused it. For twenty-five years they planted wheat, and yet more wheat, on the same soil, until they robbed it of its fertility.

Believing in soil fertility as the bedrock

of agricultural prosperity, and with faith in his ability to return that fertility to these worn-out acres, Ex-governor Hoard bought the farm fifteen years ago and started his systems of fertilizing, rotation, and deep plowing, with the result that practically every acre of his farm is able to produce twice as much to-day as it could fifteen years ago, proving that it is not impossible to make a farm produce remuneratively and to increase the soil's productive power at the same time.

With barnyard manure — one of the dairyman's most valuable by-products — as his chief source of fertility, Mr. Hoard has also used since the beginning two carloads of Tennessee raw phosphate, three carloads of ground limestone and marble, and a considerable quantity of muriate of potash.

His rotation scheme involves a five-year period — three years of alfalfa, one year of corn, and one year of barley, re-seeding to alfalfa. This scheme keeps the lands fertile and the silos full.

Deep plowing has been practised with tremendous success. With a deep-tilling machine (not a sub-soiler), he plowed last spring a plot of fifteen acres twelve inches deep, turning up, as he expressed it, a new farm. He sowed barley here — only three pecks to the acre — and as a result of the deep plowing secured the finest stand ever seen in that part of the state.

Besides these crops, he reserves ample pasturage for his big herd of Guernseys.

THE REAL MEANING OF COWS

"The dairy business," said Governor Hoard, as he and I drove out to his farm, "means a good deal more than merely producing millions of dollars' worth of butter and cheese. It means a higher average of general prosperity and better social conditions. Wisconsin has not yet become so completely a dairy region as Denmark, but Wisconsin farmers are adopting many of the Danish ideas, especially along coöperative lines. The coöperative creameries and cheese factories are the backbone of Wisconsin's dairy industry, and the coöperative cow-testing associations make it possible for every farmer to tell just what each cow earns and to weed out the 'star boarders.' By 'star boarders' I mean cows that do not pay for their keep. Each of these cow-testing associations maintains an expert whose business it is to apply the Babcock test to the milk of every cow owned by each member, for a number of consecutive days every year, in order to determine the proportion of butter-fat produced by each individual cow. Before the days of the Babcock test this was impossible. Professor Babcock's invention is Wisconsin's greatest contribution to the dairy interests of the world. The whole world had been looking for some simple, practical method of determining the quality of milk, when Professor Babcock found that the addition of a small amount of sulphuric acid would separate all the fat, making it easy to determine the exact percentage. It has made the dairy farmer more honest than the Ten Commandments ever did.

"As a result of the introduction of the Babcock test, the dairy herds of Wisconsin have been rapidly graded up, through the introduction of pure-bred sires and the importation of pure-bred cows of the best dairy breeds, until the average is probably as high in actual wealth-producing capacity per cow as anywhere in the world. In Waukesha County there are more pure-bred Guernsey cows than there are on the whole Island of Guernsey. The farmer who formerly could not be convinced that a $40 scrub cow was not as good as a $100 grade cow, or a $200 pure-bred, is now getting rid of the scrubs and buying pure-breds as fast as he can afford them.

"It has been a hard tug," said Mr. Hoard, "but it has paid. Such a result could not have been accomplished without effort. The farmer is an intellectually conservative creature; he is slow to learn. Often it has seemed like trying to pull a cat by the tail toward a saucer of cream. She will dig her claws into the carpet and contest every inch of the way, but if you can get her to the cream she will gobble it up, and ten to one she will attribute its acquisition to her own vigorous efforts. Still," and there was something more than a mere twinkle in his eyes, "it doesn't matter much after all, so long as the cat gets the cream."

ADDISON BROADHURST, MASTER MERCHANT

BY

EDWARD MOTT WOOLLEY

[In five chapters of fiction, of which this is the first, Mr. Woolley has sketched the business career of a great merchant in such a way that the foundation principles of his success are revealed. Many of the events of the story are actual experiences of living men, but Addison Broadhurst is a creature of the imagination as well as a composite picture. — THE EDITOR.]

I HAVE long had in mind the project of writing the true history of my business success. This purpose I have resolved at last to fulfil. For ten years I have delayed it because the affairs of my business have pressed heavily. They are crowding me to-day more relentlessly than ever, but I shall not longer postpone a duty that I believe I owe to other men. My business education has been acquired at the cost of untold labor and of mistakes that reduced me at times to the verge of despair. Through failure I have worked my way to a large success, and I want no greater monument than to leave this record for the guidance of men who are blundering through business careers.

Since I mean to be absolutely truthful, I claim the protection of a nom de plume, and I shall call myself Addison Broadhurst. I was born in a town of two thousand people, which for convenience I may call New Harland, located four hundred miles from the city of New York. My father was editor and ostensibly the owner of a weekly newspaper, though as a matter of fact it was practically owned by creditors. During my father's lifetime I cannot remember any period of relief from debt. My earliest lessons in home-reading were dunning letters and long, itemized statements of accounts. My father's ambition was to pay off his creditors and get square with the world.

This ambition was never realized, for when pneumonia carried him off in my fourteenth year he owed $4,852.96 — more than he ever had owed before. I give you the exact figures because I have them before me as I dictate. I am proud to say that in after years I paid these debts myself, with interest.

It was a bitter time for us, however, when my father died. I was the eldest of four children — three of them girls. There was a little life insurance, and father's lodge took care of the funeral, but within a few weeks we found ourselves penniless. I quit school and secured employment in Feehan & Son's grocery at $2.50 a week, while my mother — a refined gentlewoman — took in sewing.

The store of Feehan & Son was one of those nondescript places, lacking in appeal and individuality, such as one sees everywhere in the realms of small business. It was unpardonably commonplace — the fault of the average store that falls short of success. Its mediocrity was due chiefly to ignorance, and soon brought about the collapse of the undertaking. I had worked for the Feehans a year when they failed.

My mother's death about this time was a distressing event that I should omit here were it not necessary as a vital incident in my story. It was now impossible for me to maintain a home for my sisters; they were taken, all three of them, by a home-finding society. Margaret, twelve years old, was placed in a family in town; Jean, three years younger, was sent to a neighboring farm; baby Bess, scarcely four, was adopted by a couple who took her to Alabama. I pass over the grief of the separation.

I spent that summer as a laborer on a farm, returning late in the fall to my

native town, where, after holding several jobs, I obtained a clerkship in the clothing store of Smalt Brothers.

Nead Smalt, the elder of the brothers, was a cunning but ignorant man whose code of business ethics was hampered by few of the considerations that actuate the modern merchant. Since not many of his customers could tell the difference between cotton and wool in garments, he committed a perpetual fraud. If called to account occasionally, he could lie with the slippery tongue of an Ananias, while his wife, who spent much of her time in the store, was a Sapphira in the devious art of misstatement. Once a week our local newspaper printed a display advertisement written by Nead Smalt; and I, who knew just how much the truth was outraged, was forced to uphold the deceit. My training had indicated methods of this sort to be legitimate business. And I had seen enough hardship so that I clung tenaciously to my wage of $4 a week.

Sam Smalt, the younger, was a vicious, brutal man, lacking in the sly craft of his brother, but more aggressive. He often insulted customers openly and thus surrounded the business with many bitter enemies. Except for the pacific though hypocritical influence of Nead, the store must have closed long before it did.

When I had worked for Smalt Brothers two years, criminal action was taken against Nead and Sam for obtaining goods on false representations. On the day the store closed I was put on the grill by the attorney sent there by Smalt Brothers' creditors, and for an hour he tried to bulldoze me into telling what I knew. In the little back room of the store he threatened me, but through it all I stubbornly refused to talk. However, it looked as if I must either line up with the Smalts and uphold them in all the crooked things they had done, or else ally myself with this bully who had shaken his fist in my face for sixty terrifying minutes.

That night, after I had gone to bed, I resolved to do neither. I hated the Smalt brothers for their abuse, for the wretched wage they had paid me, and for the lies they had made me tell for them. But I hated this jobbing house and its lawyer quite as much, not only because they had sought to drag me into an affair in which I was innocent, but because I knew that the selling methods of Smalt Brothers had been winked at — even laughed at — until the Smalts turned the tables.

I crept out of bed at midnight. At first I packed an old handbag with my meager possessions, but upon reflection I decided not to take it. I had only one suit of clothes, anyway, and the apparel I left behind was scarcely more than rags. From my little old trunk I took my savings, which, if I remember correctly, were about $48. Out of this I owed nearly a week's board, so I put $3 on the bureau to cover that debt — the only debt I owed.

Nobody except myself knew what that balance of $45 had meant to me in toil and self-deprivation. I had saved it out of a slender surplus after paying for my keep and giving money to my two sisters who were living near me. Both these sisters had been unfortunate in the character of the homes in which they had been placed. Margaret was being used chiefly as a servant, and Jean's foster-mother was strict with her to the point of cruelty. Of little Bess, I knew nothing.

You may imagine, then, the distress that racked me at the thought of going away and leaving Margaret and Jean altogether. And yet these sweet sisters of mine were in reality a powerful element in my decision to go. I well remember how I took a silent vow that night to succeed, no matter what obstacles stood in my way, so that I might come back and demand the release of both girls — and of the lost Bessie as well.

Very softly I tiptoed downstairs, stopping now and then to listen for the heavy breathing of my poor old landlady, who, I knew, would sadly miss the stipend she had received so long from me. I let myself out the back way, and then cut across a vacant lot to a side street. I wished to avoid the hotel where the city lawyer was staying. Through the bare trees I could see a light in the hostelry office. It quickened my impulse as I walked as quietly as possible toward the railroad station.

I had never been in New York, and I shall not attempt to express here the emotions that gripped me when I stood outside the iron fence of Trinity graveyard, or paused before the oval of Bowling Green, or gazed away over the Bay from the Battery. The days of which I had read and dreamed were gone, and New York was a hard, uncompromising reality.

For three weeks I hunted for work; and then, with my money exhausted and my courage all but gone, I began to see, faintly, an underlying philosophical fact which became, ultimately, the wedge that I used in many phases of my later success. It was simply this: that when a man sets out to accomplish a given end he is not likely to succeed if he merely throws himself bodily against the obstructions that rise in his way; he must find a vulnerable spot and get through by strategic manœuvres.

I have known many men who battered recklessly upon the door of attainment — battered for a whole lifetime without ever breaking one of the panels. I have seen them kick with heel and toe, and hammer with both fists, and shout themselves hoarse; and then at the end they have gone away old and exhausted. Other men — ah, I have known thousands of them — have simply rapped on the door softly, whispered the countersign, and walked in. The men who do things in this world with their muscles alone do not get across the threshold of big results.

There was a grocery store on Chrystie Street where I had applied unsuccessfully for work, and now I went back there. "I should like to go out and canvass for you," I said to John Remmel, the proprietor. "I am sure that among all the people around here I can sell a lot of goods. I'll work on a commission at first; you needn't pay me a cent until I demonstrate that I'm worth hiring."

Here, you see, was a proposition that set me apart from the average man who came looking for work; so the door opened just an inch or two and I got my foot through.

For a month I traveled labyrinths of streets; and I was fast demonstrating the value of my plan, when a fire cleaned out the grocery and put an end to our promising scheme. There had been no real purpose behind it, so the accident of the conflagration was sufficient to give it quietus. Remmel discharged me, and even after rebuilding he never resumed the canvassing campaign. He went out of business a few years later.

About a week after the grocery fire I was walking on Fourteenth Street when I witnessed an accident in which a young man was run down by a delivery wagon and badly injured. I stood by while he gave his version of the affair to a policeman. He was a clerk, he said, in Flanders' shoe store on Fourteenth Street.

I went straight to Flanders' and offered myself as a substitute. I got the place — by seizing an opportunity the moment it presented itself.

While I worked at Flanders' I used to stand in the door during idle hours and watch the people go by. Every person who passed Flanders' store had on shoes; but I wondered why more of them didn't come to Flanders' to buy?

But to Flanders it was a part of the natural order of things that the procession out on the sidewalk should keep on marching by without coming in.

At the end of six weeks the clerk whose place I had taken came back and I lost my job. I might add that Flanders was closed out for debt subsequently.

My next job was in a hide and fur warehouse on South Street. A ghastly place it was. Even the office was permeated by the vile odors from the store-rooms above and below. My task was down in the basement, tallying the hides. The cavernous reaches of that cellar filled me with a vague horror when first I gazed into them.

I discovered, however, that the cellar itself was more bearable than the company of the men with whom I worked. The foreman, especially, was a brutal, vulgar man whose very presence sickened me. Yet for three long months I stuck to it because I was obsessed by a sense of duty. In my nature was a dogged persistence that now got hold of me grimly and kept me there.

But one day the foreman let loose upon me such a flood of insult, because of some slight dereliction of duty, that my fighting spirit took a turn astonishing not only him but myself. Seizing a slimy skin in both hands, I wiped him across the face with it. Then, dropping the hide on my tally-book, which lay face downward on the floor, I got out of the establishment and never went back.

Now here is the point I want to emphasize: There are some things in which persistence doesn't count; there are some things men do not need to endure. I have found that I always gained by withdrawing as quickly as possible from a path that did not lead to self-respect and better things.

On the day following my unceremonious departure from my South Street job, I applied, along with perhaps a hundred other young men, for a place in Lombard & Hapgood's department store (I am using fictitious names, remember). I went there in answer to an advertisement in the papers for six stock-clerks.

The whole lot of us were kept waiting for an hour in a little room off the shoe department on the fourth floor, and I had a chance to watch the crowds of shoppers that congested the shoe counters. I had never seen such an amazing jam of customers in a shoe store; no rush period at Flanders' had ever approached it. I could not reconcile the situation. It was hard to understand why so many people should come to this department store to buy their shoes, and so few to Flanders' establishment. The two stores were not half a dozen blocks apart, and, judged from the standpoint of convenience, Flanders' had the advantage. His store was on the ground floor, immediately accessible from the street, while this shoe department was four stories up, and could be reached only by a tortuous course through other crowded departments.

However, there was one thing that struck me as self-evident about this shoe section in Lombard & Hapgood's store: It was not arranged with a view to serving the customers as promptly as they might have been served. On this score, Flanders was far in the lead, despite his small clientele. As I stood watching the impatient, pushing mass of people, I fell to speculating on the way Flanders would have done it.

Finally the inner door opened and the applicants for work were admitted half a dozen at a time. I was among one of the last lots to go in. A heavy-set man of middle age sat at a roller-top desk back of a railing, and now he beckoned to six of us to come up alongside. Four of the earlier applicants sat on a bench nearby; all the others who had come in ahead of me had disappeared.

"Name?" asked the executive at the desk, of the first of the six. Then, in quick succession, scarcely pausing to digest the replies, he went on: "Age?" "Experience?" "Education?" "Live at home?" and so on. Almost as quickly, he gave his verdict to each of the five who preceded me to his desk: "Not qualified; you may go."

Now some people learn from observation; others do not. I could name a hundred men of my acquaintance who have tried repeatedly to get jobs they wanted, only to be told, in substance: "Not qualified; you may go." Yet they have never taken the hint and qualified themselves. In my own business to-day I see a continual stream of boys and men passing through the quick fire of questions in my employment department — and then marching out. To me, it has never ceased to be a depressing spectacle, because I know that my store has held wonderful potential opportunities for many of these men and boys.

Some faint realization of all this, I repeat, had dawned on me. "I have not had any experience as a stock-clerk," I confessed, when the question was put to me. "But," I added, quickly, not giving the man a chance to get ahead of me, "I think I could be of service in the shoe department, sir."

"The shoe department is amply supplied," he returned, shortly. And then, as if something in my suggestion had aroused his interest, he asked: "What service could you do the shoe department if you were there?"

"I think I could arrange some of the counters so the people could be waited

on faster," I answered. "The congestion out there is very bad this morning, sir."

"What would you do," he asked, "to relieve the congestion?"

"I would have a row of small counters, instead of that long one at the farther side," I told him. "I think I'd make them round, like a table with the middle cut out. Then I'd sort out the shoe sizes and put one or two sizes on a counter, instead of heaping so many together. Then if you changed the aisles ——"

"You may take a seat over there on the bench," he broke in. "I'd like to talk to you later on."

Well, he did talk to me, and afterward he took me to the manager of the shoe department, to whom I repeated my formula for quickening the selling procedure. My plan was somewhat crude, but it held the germ of something worth while, and it established me as a floorwalker in Lombard & Hapgood's shoe department.

The period on which I now entered seemed to be hedged about with a peculiar charm that caused me to go up very fast. This was due, I believe, to two causes. In the first place, I had begun to analyze the elements of success — a mental process which many men never undertake. In the second place, I had come upon Lombard & Hapgood's stage with the spotlight turned full upon me from the wings.

By the spotlight I mean the personal observation of Mr. Phelps Lombard himself — the head of the firm. On the day that I began my service he had been called on to sanction or veto my plan for rearranging the shoe department. He had sanctioned it, after careful study; and, naturally enough, he took a great interest in me thereafter.

"A young man who has the brains and initiative to think out an improvement," he said to me, "is worth having. We will advance you as fast as you deserve."

I did not stay long in the shoe department, but was transferred, on the personal order of Phelps Lombard, to the house furnishings. Mr. Lombard had been so much impressed with the benefits I had wrought in the shoes that he wanted me to try my hand in this other department. At the time of this transfer my salary was raised from $15 to $18 a week.

The manager of this department chanced to be in Europe at the time, and my immediate superior was a young fellow named Hessey, head of stock. He was very precise and orderly, but wanted no innovations, and he hated me from the start. Lombard had sent me down there as a clerk, but with orders to see what improvements I could suggest. The first thing I did suggest was the separation of two counters that stood end to end, in order to open a public passageway between. One day while Hessey was at lunch I accomplished this myself.

Hessey was furious when he returned, and immediately had the counters set back. For three weeks I kept making reports on possible improvements and Hessey opposed them all. Then one day Lombard came down to the basement and incontinently fired Hessey on the spot.

I have always found that men who build high fences of wisdom around themselves and refuse to let other chaps with ideas get inside are the ones who stay in the inclosure of mediocrity all their lives.

It wasn't long before I began to be known in the store as "the system bug." I had embarked on the career of a specialist. My specialty was moving counters and shelves and stock, and doing things of that sort, so as to quicken the operations of the store and reduce expense. It was because I stuck to this line of effort that I kept going up. It was because I worked that I got results. This statement, I know, sounds like a platitude, so I want to tell you one instance that will mean something concrete.

I had been sent by Mr. Lombard to the books and stationery to boil that department down to three quarters of the space it occupied. The task was a complicated one, involving a complete reclassification of stock. As I proceeded with this preliminary work, it got hold of me by degrees until I could scarcely think of anything else.

One night I quit work when the store closed, and went to dinner. I was in the habit of eating in restaurants here and there, as my inclinations moved me. Now I dropped in at a small café near the

store, where I chanced to find several young fellows who belonged to the Lombard & Hapgood organization. They were going to the theatre that night, and they suggested that I go along.

Now there were times when I enjoyed a show as much as anybody, but just then the very thought of one was repugnant. I had a show of my own going on in my head. It possessed a full plot, with plenty of dramatic incident and a lot of scenery that was shifting continually. Its story was laid in the books and stationery department.

"Oh, wake up and quit moping!" advised one of my friends, a young man named Talbot. "What's the matter with you, Broadhurst? You're getting to be a regular clam. Come along to the show."

Talbot was a floorwalker in the white goods, a job he had held several years. He dressed handsomely and knew a lot of the best customers by name, but he was one of those men who stay in one job a long time despite their creased trousers and pink silk neckties. A man can be a floorwalker, you know, and never be worth more than $15 a week to a business.

"Thanks," said I; "but I mean to work to-night in my room."

"Oh, let's not talk about work!" exclaimed a chap named George Day, who clerked in the rugs. "We rang up our time when we left the store. I don't want to think of work until eight o'clock to-morrow morning. Cut it out!"

"I'm much obliged," I returned; "but I think I'll cut out the show instead."

It was midnight when I finished my classifications. I was deadly tired, and I went to bed and to sleep at once. But at one o'clock I awoke, with the whole drama of the books and stationery running through my head again. I couldn't get rid of it, so in half an hour I got up, dressed, and went out.

New York never sleeps, you know, and over on Sixth Avenue I found things even lively. There was a crowd of young men coming up the street arm in arm, singing, and one of them I recognized as George Day. It is a curious study to watch the night life of a city — and if you've seen much of the world you won't need a guide with a megaphone to point out the chaps who'll never be members of the firm.

I walked down Sixth Avenue to Lombard & Hapgood's and around to a side entrance, where a watchman admitted me. I well remember how the books and stationery section loomed vague and shadowy in the deep gloom of the store. The electric light current was off, and only stray rays filtered in from the arc lights of Sixth Avenue. The whole place was ghostly in its white cotton shrouds. But the watchman got me a lantern and stood by, wondering, as I paced off the spaces, and measured, and marked broad chalk-lines on the floor.

I was still there when dawn came out of the Atlantic Ocean and opened up the everlasting new problems for this mighty city of opportunity. But for me this particular dawn found a problem solved. The night has opportunities as well as the day.

Talbot is still a floorwalker in New York. I see him occasionally, and I pity his gray hair and lean, mournful face. I don't know what has become of George Day — poor chap! The last time I saw him he was barking for a red-fronted freak museum on the Bowery. He was down and out, he told me, and he asked for a dime. Probably by this time they have got him on the desert island up the Sound. You know the city owns that dreadful island, and hires a gang of ghoulish laborers to stay up there and dig trenches for the human derelicts who are brought up in boxes from New York.

It is easy to ring up your time, as Day did, and then forget your work until you ring in again next morning; but if I had done that I'm sure I'd never have got a desk in the room next to Lombard's, with "Superintendent" in goldleaf on my door.

It was work and results that wrote this gold tracing on the door of my private office five years after I went to New York. And then two years later something happened that began a new and very different epoch in my career. I should like to omit portions of it, but I shall try to hold myself to my purpose.

The whole trouble lay in the fact that I had been climbing a flight of circular stairs.

THE MARCH OF THE CITIES

HOW NEW YORK PROVED THAT IT IS A CITY AND NOT MERELY A PLACE

NEW YORK has discovered its civic pride.

Most people didn't know it had any. Most New Yorkers, for instance, were perfectly sure it hadn't.

"New York isn't really a city," was the way they expressed it. "It's just a place on the map, occupied by four million people of different races and different interests, all trying to get enough money quick to live on somewhere else."

That was the ordinary, if somewhat cynical, view of New York by New Yorkers and observers from outside alike. And it seemed to be as true as generalizations usually are.

Of course, there were exceptions. Here and there were little groups of people who *were* trying to do something for the good of the town and were accomplishing something. These and half a dozen more organizations that represented some special interests were, in fact, getting results little short of wonderful, when their limited resources are considered.

But nobody knew it.

That was the trouble — there was no community spirit.

The newspapers didn't help. If they printed anything at all about what the Merchants' Association was doing, which most of them did not, it was usually some formal statement or committee report and was placed back in the section of the paper devoted to the news of the stock exchange and the real estate market — a section which, contrary to the prevailing impression, is not the part of the paper every New Yorker turns to eagerly before he opens his eggs at breakfast.

It wasn't the newspapers' fault. They, too, suffered under the delusion that New York had no community spirit — that its populace was interested only in the ticker and the criminal courts, the stage and the Great White Way. And the populace, reading little and hearing less about the things the commercial organizations were doing, fell into the habit of thinking that nobody was doing anything and comforted itself with the thought that New York probably didn't need any "boosting" anyhow, but would continue to forge ahead through its own momentum and remain the Metropolis of the New World, whether they did anything or not.

The men who were trying to do something knew better. They were alive to Boston's efforts, backed by its Chamber of Commerce, 4,000 strong, to make that ancient city a more formidable rival of New York. They knew how Chicago's Association of Commerce was creating conditions that led great industrial enterprises to choose their city rather than New York for their factories. They saw clearly the need of doing for New York such service as the community organizations of San Francisco and Denver, Buffalo and Detroit, New Orleans and Jacksonville, are doing for their towns. But such work takes money, and the only way commercial organizations can get money — regular incomes, at least — is through membership dues. And the Merchants' Association, the largest of all the New York organizations, had only 1,500 members!

If it had only half as many members in proportion to population as Boston's organization had, there would be 16,000 instead of 1,500. Recruited to the proportionate strength of San Francisco's Chamber of Commerce, it would have 48,000; of Denver's, on the same scale, it would have 79,000 members.

Public-spirited citizens themselves, the directors of the Merchants' Association had more faith in the civic spirit of New York and New Yorkers than most of their townsmen had. They decided to go ahead and begin the additional work that needed to be done and, in some way or other, they were sure they could get enough additional income to sustain the Traffic Bureau, the Convention Bureau, the

Publicity Bureau, and the Foreign Trade Department which they had decided were needed. A few of the directors and their friends under-wrote the added expenses, and the new activities were undertaken early in 1912.

Then came the question of getting enough new members to provide for the added expenses, and it was decided to go after them in just the same way that the commercial organizations in St. Paul and Wichita and Cincinnati and scores of smaller cities had gone after them, and get them — by a "whirlwind campaign" and an appeal to civic pride.

A good many people smiled broadly when they heard of the project.

"You'll get nowhere in New York that way," said they. "New York is different. There isn't any civic spirit here."

Among those who didn't take any stock in this notion were the young men at the head of Town Development Company, Lewis D. Sampson and Will L. Finch, and their staff. They had been called in by the Merchants' Association to plan and carry out the membership campaign. They had succeeded in St. Paul, and they had had similar experiences in many larger and smaller cities. So when cynical friends warned them that they couldn't do anything in New York, they smiled and remarked that that was just what they had been told in every city they had visited.

They studied New York and its conditions and especially its people for a good many weeks, and then planned the Merchants' Association campaign for new members. The first thing necessary was to arouse the New York public to a sense of the necessity for organized, coöperative effort for the good of the town. They had been told they could not expect any support from the newspapers. Yet the New York newspapers came to the front unanimously and more effectively than had been the case in any other city.

People began to take notice that New York was in danger. Business men whose names carried weight began to write letters to the papers and to their friends about the situation. Still there were those who doubted that New York business men would, when it came to the pinch, give their time and personal services to an actual canvass for members.

The test came on the evening of November 14th, when nearly four hundred of the city's most influential men attended a banquet given by the Association at the Hotel Astor. And after Mr. Harry A. Wheeler, President of the Chamber of Commerce of the United States of America, had warned them solemnly and eloquently of the efforts other cities were making to divert the business of New York to other points, volunteers were called for to go out in person and invite business men to join the Merchants' Association.

Nearly three hundred responded.

These three hundred, including the actual heads of many of New York's largest commercial, industrial, and financial institutions, went out on the streets for four days, two hours a day, and gathered in members for an organization which many of them had only vaguely heard of a few weeks before.

They met every noon at Delmonico's down-town restaurant to report the results of their morning's work and displayed more enthusiasm than the business men of the "live" western towns had shown. The newspapers saw the event as news and printed daily columns about it. The campaign became the principal topic of discussion wherever business men met. The new members came. As this is written they are still coming. The directors of the Merchants' Association had thought they would be doing well if they doubled their membership. They have done that, and more.

But most important of all, they have revealed to New York and New Yorkers that there is civic pride in the big town — that its business men are not the self-centred, unpatriotic individuals they had been thought to be, but are "folks," just like the business men of other towns. If there is any difference, it would seem to an outsider that New Yorkers have shown themselves a little more easily aroused by appeals to their civic spirit, and New York newspapers a little more enthusiastic for the common welfare.

FORWARD TO THE LAND

KEEPING THE BOYS ON THE FARM

THERE is a farmer in Southern Georgia whose neighbors all consider him an unusually successful man. He has farmed all his life, but until five years ago he had merely made a fair living in return for long hours and ceaseless work. His career was not such as to tempt the younger members of the family to stay on the farm. The one who told this story, in fact, left the country and went to New York.

Five years ago the older man's health gave out. He was laid up all winter and when spring came on he could get around a little but he could no longer work with his own hands. His neighbors all said, "It's too bad he's all wore out," and some of them even added, "laid by to die."

He gave up half the farm and hired help to work the remainder, under his supervision. Watching the Negro work was not interesting employment for all his time and so he attended crop improvement meetings, began to get in touch with the state and national agricultural experts. While his hired Negro was working with his hands, the "worn out" farmer got to work with his head, and what he thought out the Negro carried out under his direction. Now there are two or three Negroes, though the farm is not as large as it used to be when he worked it himself. The profits, on the other hand, are three or four times what they used to be — and the younger member of the family who told this story is now in Georgia swapping some town lots for a farm, though he has a two-year contract which he has to fulfil before he can go to it permanently.

A well known fruit raiser in New Jersey tells this story of his success:

"At twenty-one I rented the old homestead. I tried to buy it, but father said no. It was too big a thing, more than I would ever be able to pay for. No one member of his family need ever hope to own it. As I could not buy the one I lived on, I bought an old neglected fruit farm, seven miles from home, and farmed it in addition to my home farm. The fourth year our apples averaged 40 cents a basket and the farm sales were more than $6,000. All this time, the farm I lived on was also doing a little better every year so that I once more had some free money. By this time father had forgotten that no one of his sons could ever pay for the whole of the farm and he sold it all to me. After making a settlement for the home farm (largely paper) I still had a little money left and I bought another farm right away. The sales of the farm the first year were $4,100, the third year they were $5,100, and last year (the twelfth) they were about $10,000 clear of commission. The other farms I have tackled have given me similar results.

"My wife goes around with me to these farms and is just as much interested as I am. My older boys are as enthusiastic as any farmers you ever saw. The oldest one is at Cornell studying agriculture. The next two will be somewhere studying agriculture next year. They are more enthusiastic than their father, and when they come back we will do still better. I have got a little red-headed boy at home so high. He wishes he could hurry up and grow big and learn how to farm.

"Farmers are prosperous. They have automobiles, they have steam-heated houses, and live as well as anybody. Sentiment is all right, but sentiment won't hold boys on the farm. But let me tell you, if you make your boys think that a farmer can make more money, have more fun, lay by a better competence for old age than any other line, you will put those boys in a state of mind that you cannot drive them off the farm with a club."

ANSWERS TO QUESTIONS ABOUT FARM LANDS

61.—*Q*. What is the approximate value of land in Lawrence County, Illinois; to what are the clay hills in the central and western parts adapted; and what could I afford to pay for a farm there in order to make a fair living?

A. In 1910 the average value was $63.56 per acre — 141 per cent. higher than in 1900. The chief crops in order of acreage are corn, wheat, and forage grasses, but until improved by careful, scientific treatment, the clay soils are not adapted to the profitable production of any of these crops. Their market value ranges between $25 and $75 an acre, exclusive of mineral and oil rights.

What you could afford to pay for a farm there or elsewhere would depend on how good a farmer you are and what you plan to do with the land.

62.—*Q*. Will you please tell me about the land, crops, and farming in Amherst County, Virginia; why does it seem to rain so rarely and why do not animals thrive there?

A. Through a local representative of the United States Department of Agriculture we learn that the clay soils of Amherst County produce fine grass, cattle, and, in certain sections, fruit. These soils have been overworked and underfed until in many cases they are in very poor condition. However, proper care will enable many of them again to produce fifty to one hundred bushels of corn and three or four tons of grass to the acre.

For the last two years this section of Virginia has suffered the most severe droughts in twenty years. Why this is so we cannot say, but it probably accounts for the scarcity of rain which you have noticed. Serious effects can usually be avoided by deep plowing and by the maintenance of a deep seed bed and a soil mulch. We can locate no facts bearing out your statement that stock does not thrive there. Excellent cattle and horses are being raised in Amherst and surrounding counties.

63.—*Q*. Do you consider the purchase of land in Meade County, Kansas, a good investment?

A. Without knowing the cost and the exact location of the land it would be foolish to give a definite answer. The county receives on the average twenty-one inches of rain, but crop failures because of drought are on record. The range of temperature between 113 and -24 degrees supplies some rather severe extremes.

Of the two main soil types, the Richfield silt loam is well adapted to wheat growing but calls for very careful management. The Clark stony loam, with which is mixed considerable gravel, is chiefly used for pasturing. We hardly anticipate any great boom in Meade County land and if you are being influenced by promises of large profits and quick returns we advise you to use a great deal of caution.

64.—*Q*. Can you refer me to reliable sources of information about irrigated land in Colorado and New Mexico?

A. There are in these states lands irrigated by Government projects and Carey Act developments, and also school, state, railroad, and private lands, some of which are irrigable. Mr. C. J. Blanchard, of the United States Reclamation Service at Washington, D. C., can inform you as to the National projects and local water users' associations can give you further facts; the secretaries of the state boards of immigration at Denver, Col., and Albuquerque, N. M., can tell you about state and school lands; and the agricultural commissioners of railroads passing through the territory, about lands along their lines. Property under private ownership can ordinarily be located only through agents and advertisements.

65.—*Q*. Can land be obtained cheap or through homestead claims around Mosier, Ore.? What is the type of soil there?

A. There are about 260,000 acres of homestead land still open in Wasco County in the north of which Mosier is situated. Information as to its exact location can be obtained from the Land Office at The Dalles, Ore., but its nature and desirability can be learned only by a personal examination which is required of entrymen. There is also considerable school land offered by the state at not less than $7.50 per acre, and about that the state land agent at Salem can advise you.

The soils of the Mosier, Hood River, and other valleys are chiefly derived from basaltic rock and volcanic ash and when irrigated are very fertile. Along the rivers there are areas of sandy loam and of heavier, more silty formations. Around The Dalles conditions are said to be good for winter wheat raising, but apples will probably thrive on any of the uplands if water is supplied to supplement the rainfall, which averages sixteen inches a year.

The World's Work

WALTER H. PAGE, EDITOR

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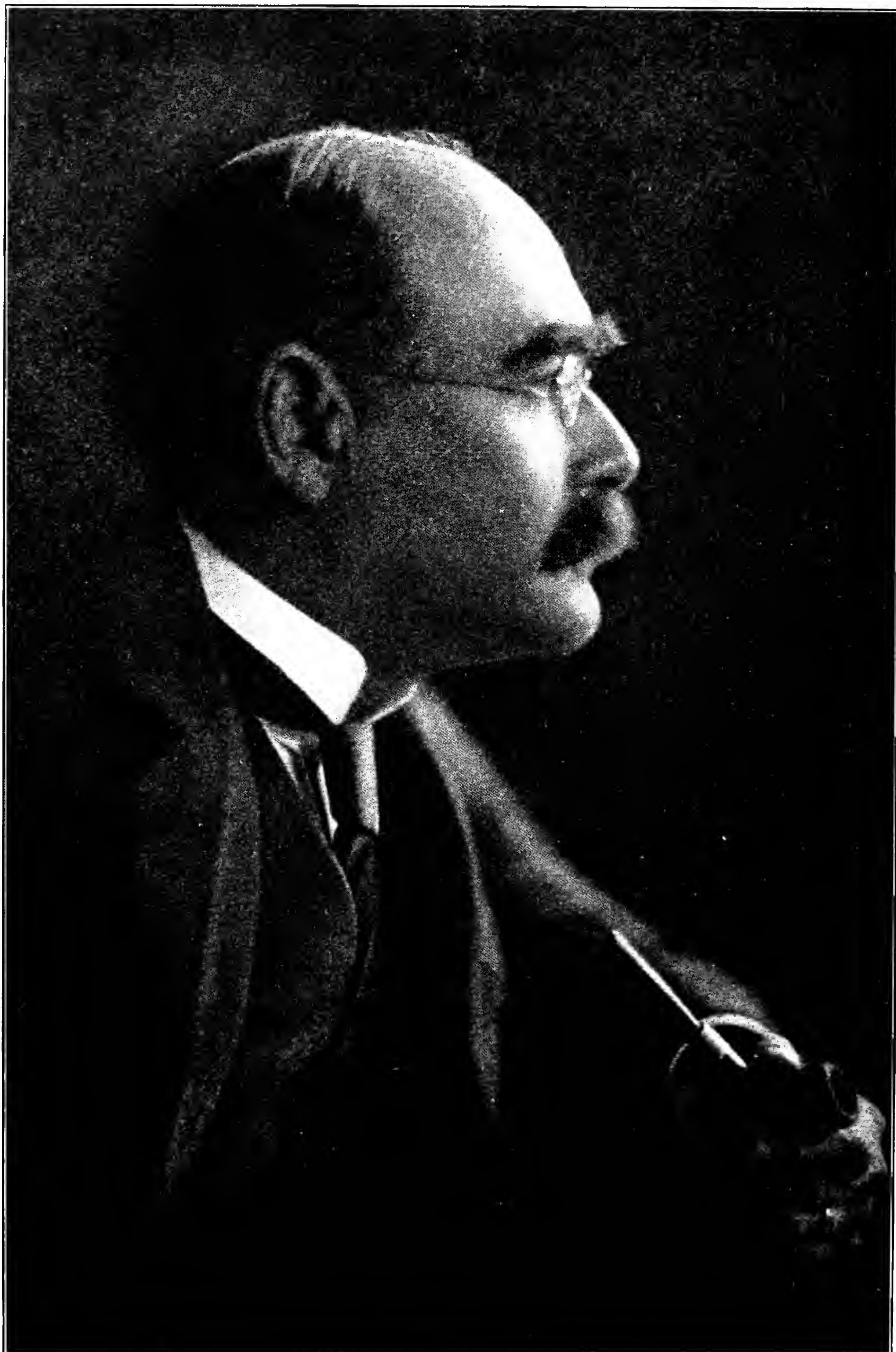


From *The Bookman*, London

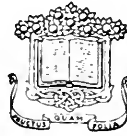
MR. RUDYARD KIPLING

WHO RECENTLY CELEBRATED HIS FORTY-SEVENTH BIRTHDAY

THE

WORLD'S WORK

FEBRUARY, 1913

VOLUME XXV  NUMBER 4

THE MARCH OF EVENTS

DURING the half-century 1850-1900 Big Business and Big Finance organized themselves. They profited by the development of cheap transportation and all the great inventions of that period. They profited, too, by the peculiar fiscal machinery that had its origin in the Civil War. It was a time of unparalleled business growth and expansion. Great leaders were developed. Great cities were built. The world was made anew.

During that time farming was overdone because of the cheap land that the Homestead Act opened; for the continent was then undergoing a forced agricultural settlement. And so long as farming was thus overdone, we easily grew more than we consumed — with little profit.

Now conditions are changing and the change will be permanent. Our population is fast gaining on the farm output. We need all we can grow; and farming is now and will remain a profitable business — that is to say, sufficiently remunerative to attract and to satisfy capable men.

Under this new condition, which is a fundamental and revolutionary and permanent change, capital must go to the land and will gradually go of its own accord because it will find such an investment profitable and it will become more and more profitable as population increases.

And the danger here is of farming's becoming so organized as to parallel the organization of Big Business. We may have far too many absent proprietors such as already exist in Iowa, or a distinct tenant class such as has already begun to appear in South Carolina.

Now, during this transition, it will be easier than it will be later to fix working owners on their land by a right system of farm finance, and thus to hasten the right development both of the land and of the man on the land.

For this reason credit societies, coöperative buying and selling, conservation, and the right new kind of country school are not merely incidental advantageous devices for helping country folks. They are become our greatest problem of constructive national welfare. They give organized society, governmental and private, an opportunity and present a duty that are new in our history — new, at least, in the insistence of their demand.

Those serve their country best who give time and thought and work and money to promote these things.

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JUDGE ALBERT B. ANDERSON

UNITED STATES DISTRICT JUDGE, OF INDIANAPOLIS, WHO PRESIDED AT THE RECENT TRIAL OF THE THIRTY-EIGHT OFFICERS AND MEMBERS OF THE INTERNATIONAL ASSOCIATION OF BRIDGE AND STRUCTURAL IRON WORKERS WHO WERE CONVICTED OF PARTICIPATION IN THE WHOLESALE DYNAMITING OF STEEL BRIDGES AND BUILDINGS THROUGHOUT THE COUNTRY

[See "The March of Events"]

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DR. CARL L. ALSBERG

WHO WAS RECENTLY PROMOTED FROM THE RESEARCH SECTION OF THE BUREAU OF PLANT INDUSTRY IN THE DEPARTMENT OF AGRICULTURE AT WASHINGTON TO BE CHIEF OF THE BUREAU OF CHEMISTRY, SUCCEEDING DR. HARVEY W. WILEY AS THE GUARDIAN OF THE PURE FOOD LAW

MR. FREDERICK HAYNES NEWELL

DIRECTOR OF THE RECLAMATION SERVICE, WHICH IS WRESTING A NEW AGRICULTURAL EMPIRE FROM THE DESERTS OF THE WEST BY SOME OF THE MIGHTIEST AND COSTLIEST ENGINEERING WORKS IN THE WORLD

(See Page 390)

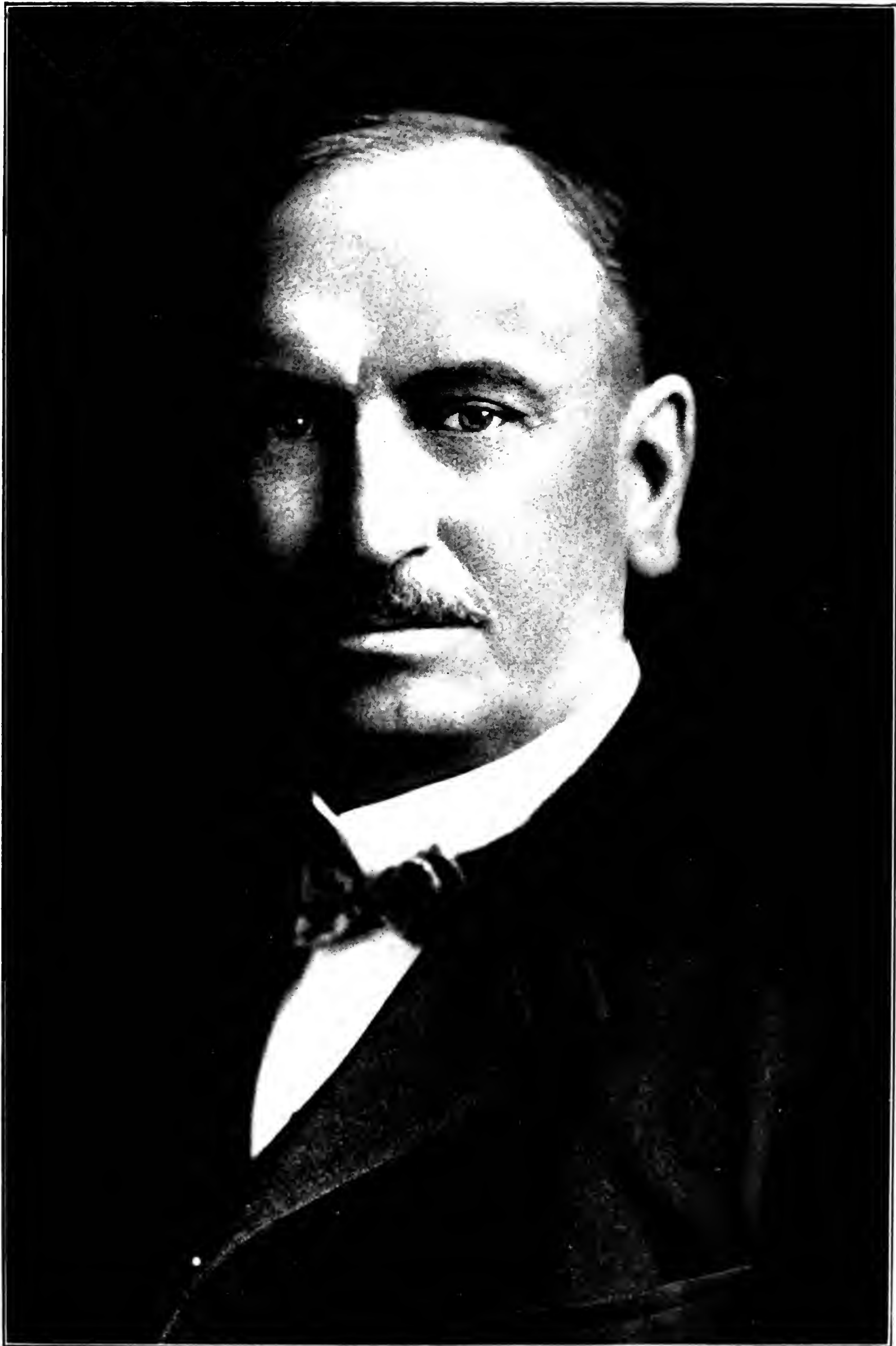
WHAT THE RECLAMATION SERVICE IS DOING

UPPER PICTURE: A NEW ORCHARD ON LAND THAT WAS DESERT THREE YEARS AGO, ON THE BOISE PROJECT NEAR NAMPA, IDAHO. LOWER PICTURE: A CONTRAST BETWEEN DESERT AND CULTIVATED LAND ON MR. WILLIAM COGSWELL'S HOMESTEAD ON THE TRUCKEE-CARSON PROJECT, NEVADA

THE ARROWROCK DAM

IN COURSE OF CONSTRUCTION BY THE RECLAMATION SERVICE ON THE BOISE RIVER IN IDAHO. IT WILL BE ABOUT 350 FEET HIGH, WILL STORE 320,000 ACRE-FEET OF WATER, AND WILL COST $7,000,000

[See page 396]



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HON. THEODORE E. BURTON

SENATOR FROM OHIO, WHO DECLARES THAT PORK-BARREL APPROPRIATIONS AND LOCAL SELFISHNESS ARE THE CHIEF REASONS WHY GREAT NATIONAL ISSUES ARE NEGLECTED BY CONGRESS

(See Page 438)

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COL. G. W. GOETHALS

THROUGH WHOSE EXTRAORDINARY ACHIEVEMENTS AS CHIEF ENGINEER THE PANAMA CANAL WILL BE COMPLETED IN TIME TO CELEBRATE, BY ITS OPENING, THE 400TH ANNIVERSARY OF THE DISCOVERY OF THE PACIFIC OCEAN BY BALBOA

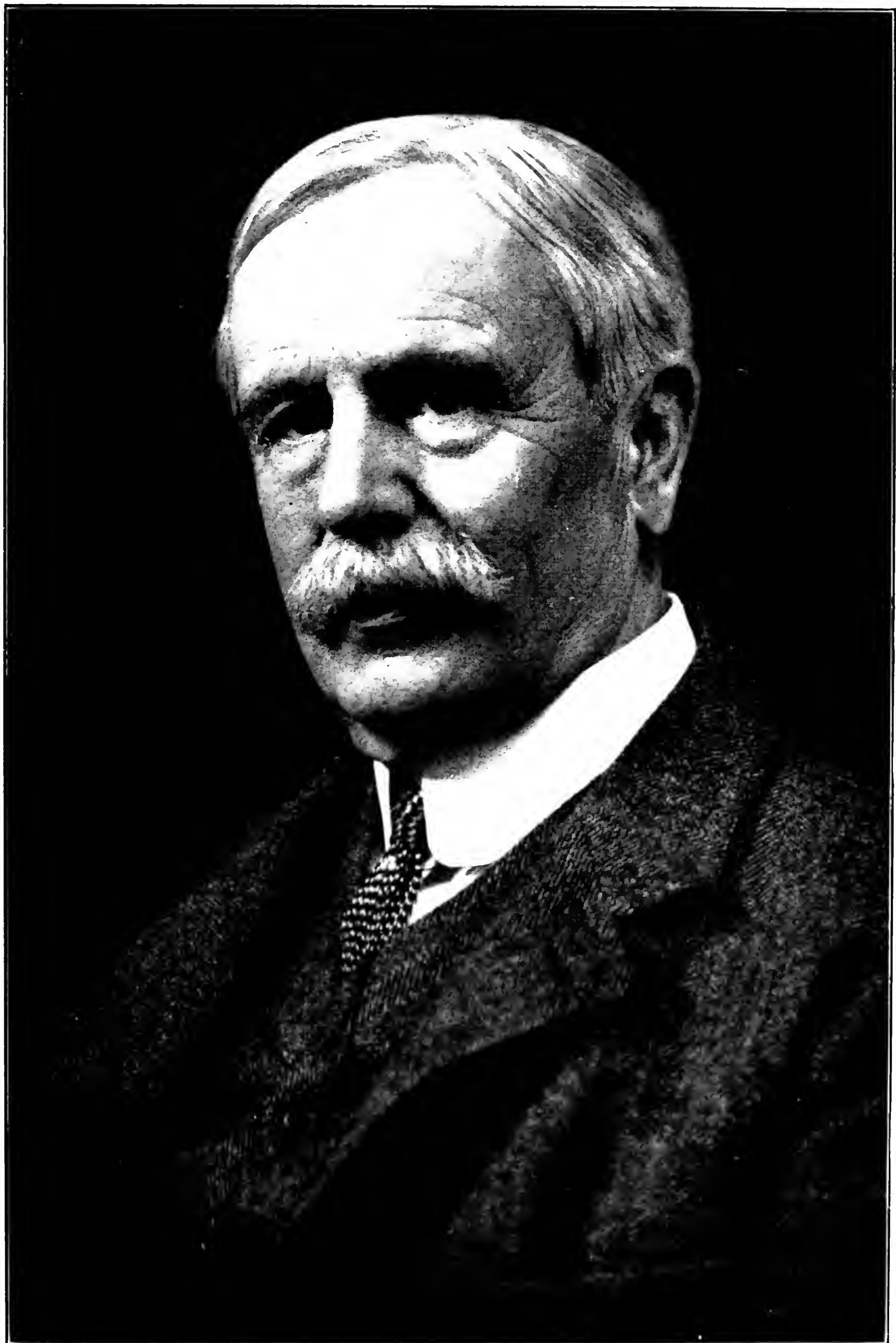
ADMIRAL GEORGE DEWEY

WHO RECENTLY CELEBRATED HIS SEVENTY-FIFTH BIRTHDAY IN EXCELLENT HEALTH WHICH HE ATTRIBUTES TO HIS ACTIVE LIFE, TO HORSEBACK RIDING, AND TO CARE IN DIET

By courtesy of Frederick A. Stokes & Co., N. Y.

MR. ALFRED NOYES

WHO IS REGARDED BY MANY AS THE BEST OF THE YOUNGER POETS OF ENGLAND



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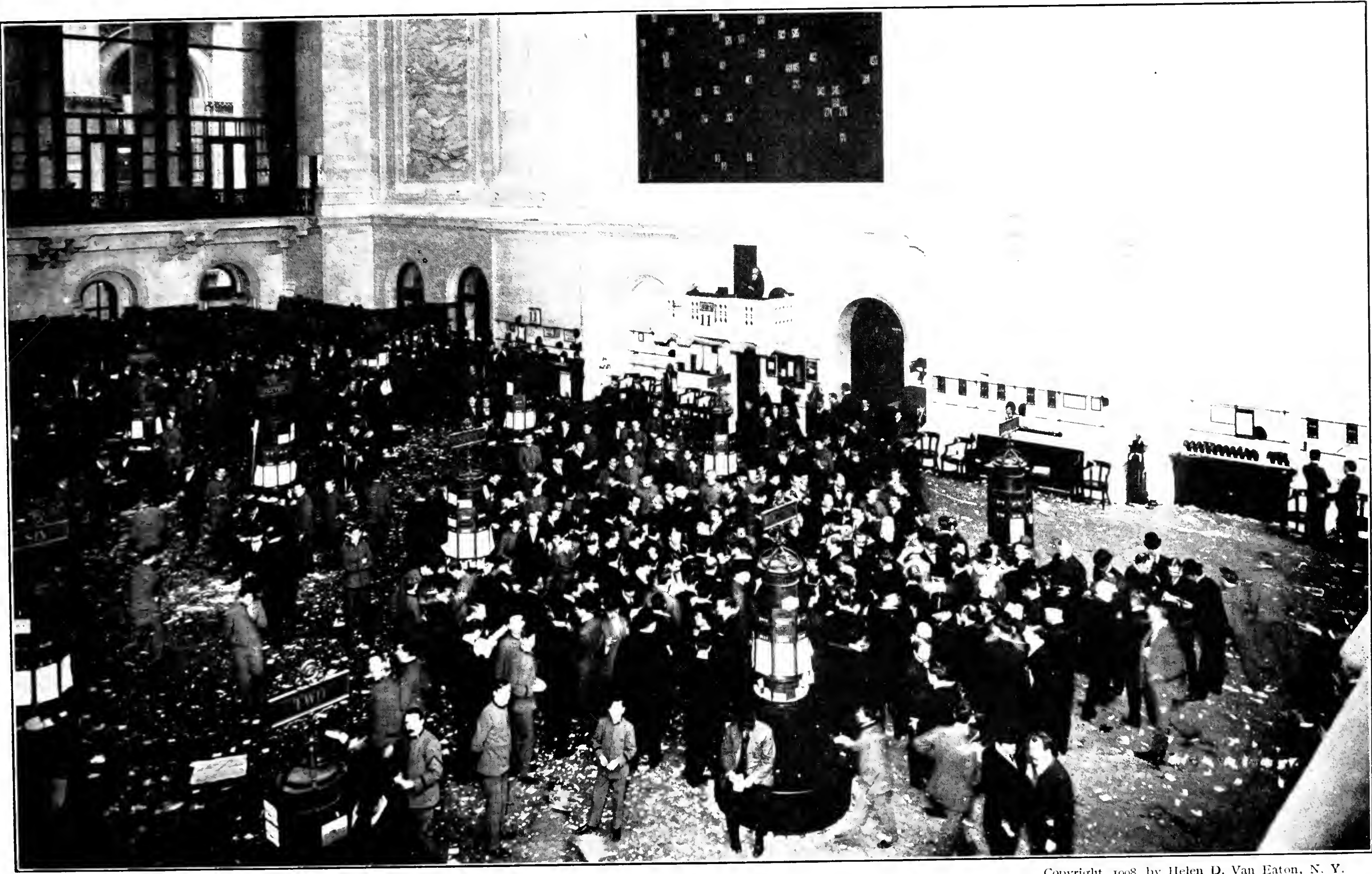
MR. WILLIAM RUTHERFORD MEAD

THE VETERAN AMERICAN ARCHITECT WHO RECENTLY RECEIVED THE GOLD MEDAL OF HONOR OF THE NATIONAL INSTITUTE OF ARTS AND LETTERS "FOR DISTINGUISHED SERVICE IN THE CREATION OF ORIGINAL WORK" IN ARCHITECTURE



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THE NEW YORK STOCK EXCHANGE

THE GREAT MARKET PLACE FOR THE QUICK SALE OF SECURITIES, WHICH HAS LOST MUCH OF THE PUBLIC ESTEEM THAT THIS SERVICE WARRANTS BECAUSE OF THE GAMBLING IN SPECULATIVE VALUES THAT IS PREVALENT IN ITS TRANSACTIONS — A GREAT BUSINESS AGENCY THAT LAGS BEHIND THE REST OF THE COUNTRY IN THE PRACTICE OF BUSINESS MORALS

[See "The March of Events"]

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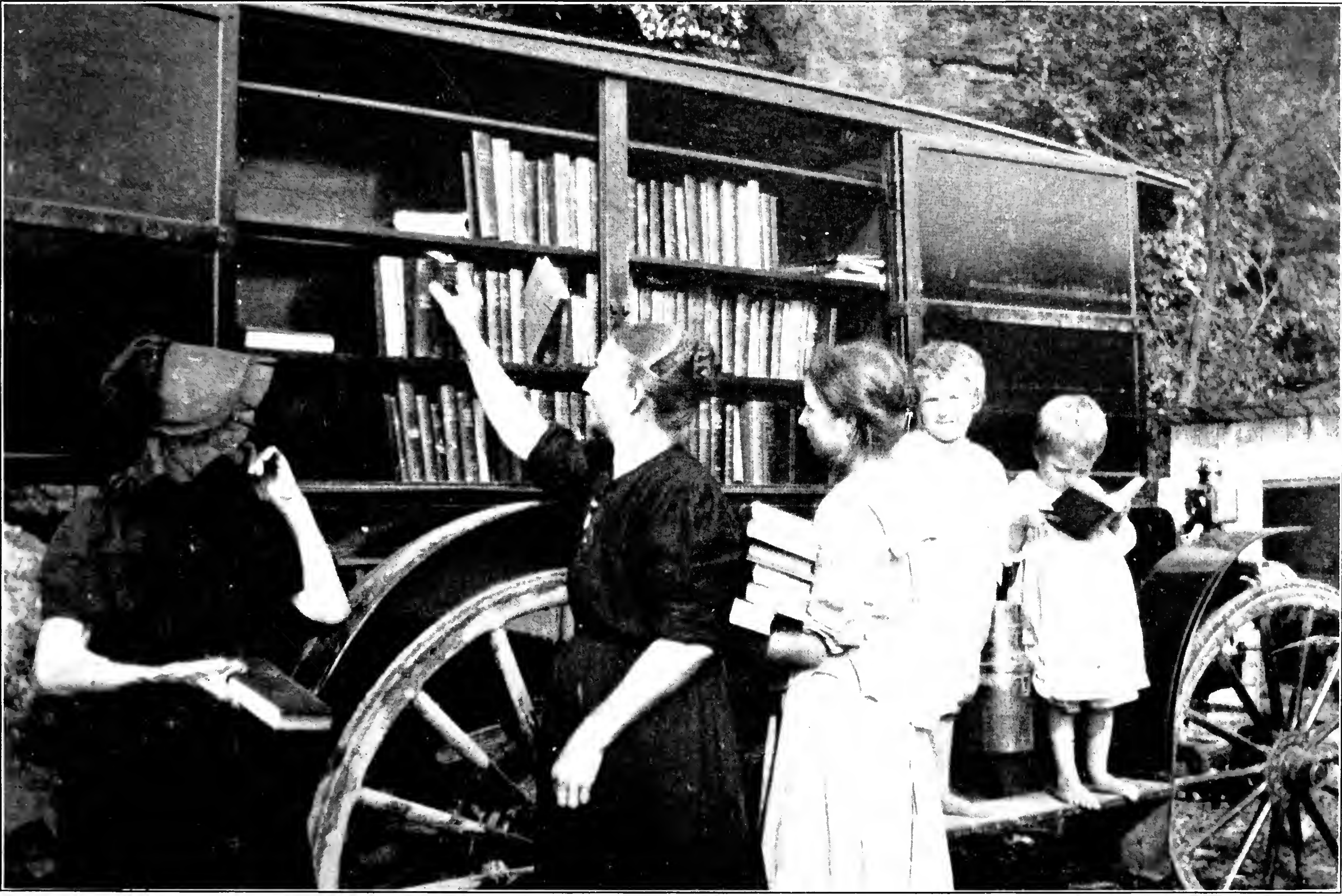
THE GROWTH OF AMERICAN CITIES

BALTIMORE IN ASHES IN 1904, AND BALTIMORE REBUILT IN 1911. PROPERTY WORTH 125 MILLION DOLLARS, LOST IN THE DESTRUCTION OF 86 BLOCKS OF BUILDINGS IN THE BUSINESS CENTRE, REPLACED IN SEVEN YEARS BY A CITY WHICH DECLINED ALL OFFERS OF OUTSIDE AID IN THE TASK



AN AUTOMOBILE THAT HAS TAUGHT A COUNTY TO READ

IN THE FIRST SIX MONTHS OF 1912, THIS MOTOR TRUCK CIRCULATED 28,000 BOOKS IN WASHINGTON COUNTY, MARYLAND, OF WHICH MORE THAN TWO THOUSAND WERE DELIVERED TO THE HOMES OF REMOTE FAMILIES IN THE RURAL DISTRICTS

[See "The March of Events"]

A WORD OF WARNING TO THE BUSINESS WORLD

DURING the spring and summer the most important schedules of the tariff will suffer reductions in the rates of duty. The election of a Democratic President and of a Democratic Congress was a command of the people to do this very thing. Fortunately for the business interests of the country, Mr. Wilson and Mr. Underwood are not men of destructive or radical temperaments. They are not doctrinaires. They will proceed cautiously; for they know the value of commercial security and the danger of great sudden changes. And they, no doubt, will have more to do with the extent of reductions than any other two men. So much for the new Administration and the new Congress and the command of the people.

Now again (for this cannot be too often or too emphatically repeated) — the business world. Every change is going to affect somebody's business. Every change of duty will require some readjustment of the manufacture or of the marketing of some commodity. And when rates are changed, even if all the changes be very small, the total disturbance will be considerable. If these changes are wisely made, the total result will be a benefit to the public; but some individual or company will be affected — and some hurt — by every change.

This is perfectly well known to every man who thinks. Every man who thinks knows, too, that by a little looking ahead, the effects of these changes can be softened or avoided. The readjustment of business to lower tariff rates can be made without disturbing the whole business world. But such a readjustment requires a personal, patriotic, quiet, forehanded preparation by everybody who will feel the change. To do this is every man's duty to himself and to the country.

To fail to do this in time but to wait till he is "hit" and then to make a great outcry and to predict disaster and to invite general business hesitancy and general business doubt and possibly a panic — that is the act of an unwise man.

It ought now, therefore, to be distinctly understood and noised abroad that no part of the business world will be allowed by the community to go on as if nothing were going to happen and then, when the tariff changes are made, to cry ruin and panic. This seems a fit subject for boards of trade and chambers of commerce and such bodies to take up without loss of time. A fool or a few fools in every community might produce a commercial stagnation or even a panic that all the wise men could not undo.

Of all men, business men ought to be the most forehanded and the last to drift with the tide.

THE DYNAMITERS' CONVICTION

NOT often is there an event so reassuring as the trial and conviction, in the Federal Court at Indianapolis, of the thirty-eight officers of the Iron Workers' Union charged with complicity in the numerous dynamite outrages perpetrated by the McNamaras. The trial lasted three months. It was going on during the Presidential campaign. It at first shocked the public mind and was then almost forgotten. The issue was, at bottom, a perfectly clear issue between order and lawlessness, between safety of life and property and criminal violence against life and property. But the whole vast case was so complicated as a chapter in the social entanglements of the day, it so easily aroused prejudices and passions, and, in particular, it marshalled in sympathy with the defendants so wide a public sentiment disposed to feel for the laboring man and to believe labor leaders incapable of the criminal charge against the dynamite conspirators, that it was doubly reassuring that the calm methods and conclusions of judicial inquiry should have their course and be respected.

The verdict, moreover, was universally accepted as the verdict of inexorable justice; and it was due in large measure to the demeanor of Judge Albert B. Anderson. No doubt almost any other judge on the Federal bench would have presided as well as Judge Anderson did; at all events the Court before whom this difficult case came

acquitted itself in a manner worthy of the highest expectation of a people accustomed to believe that the anchors of freedom, order, and justice are safely grounded in the righteousness and wisdom of our courts.

Severe as will, necessarily, be the blow to organized labor, there can be no doubt that both its better and permanent interests and the security of Society in general will be advanced by the punishment of these leaders and by the orderly demonstration of the power and fairness of the Court.

OUR FUNDAMENTAL NATIONAL TASK

SUPPOSE you look over any agricultural country that you know, or for that matter any agricultural neighborhood, and make a study of farming as it is done. Regard farming as a business, an organized business, which requires, as every business requires, capital and labor and skilful direction profitably to produce a particular product. You will discover that there is hardly a farm (leave out those farms that are rich men's playthings) which has the capital it ought to have to be conducted as a business.

Of course, many of them, perhaps most of them, lack also the business organization and the skilful management that are necessary for success in a manufacturing business; and this lack is a sufficient cause for the lack of enough capital. Still the fact remains that (let us say) 90 per cent. of the cultivated acres in the United States lack money enough to bring them to profitable culture. At the same time it is probably true that the present prices of grain and cotton make it possible for a businesslike farmer, who has good land and capital enough, to earn (let us say) fair wages for himself and from 6 to 10 per cent. on his investment.

Now we begin to see the great national problem before us. If these suppositions are true, two things must be done: the farmer must become not only a good tiller of the soil but a business man capable of using his capital wisely; and he must have money enough to develop and to stock and to equip his farm so that he may earn a good profit on his investment.

We shall remain a lopsided people till we bring this about.

To bring this about, every agency now in existence to build up country life is needed — the right kind of school, the agricultural college, demonstration farm work, loan societies that eliminate exorbitant interest rates, coöperative buying and selling, neighborhood industries such as canning clubs; and we need more than these. We need borrowing societies of farmers (like the Raiffeisen credit societies of Europe) that get money for productive uses at reasonable rates for long terms and at the same time train the men who get these loans to the wise use of them — make them good managers of money.

No other tide now seems so strong in the public opinion of our country as this determination to build up farming on a right and profitable basis, not only for the farmer's sake but for the sake of our country and of a wise and safe civilization. It will not be done by any plan which smacks of paternalism or of charity. It must be done on a sound economic basis or it will not be done at all.

When you are asked, therefore, to fall in line with this movement or with that, to contribute to this organization or to that, to help secure the passage of this bill or that, be very careful to avoid the "cranks" and the "philanthropists." But be equally careful to do what you can to reorganize our life with proper reference to its fundamental industry in ways that will stand the test of sound thought, of real experience, and of — time.

THE RISE IN LAND PRICES

THE rise in real estate prices in city and suburban localities in many parts of the United States has practically stopped sales; and this is a very bad sign. It is the work, of course, in many cases the culmination of gradual work over a long period, of land and lot speculators. Owners who paid prices that were too high will not sell till they are forced to sell; and prudent home-builders will not pay excessive prices, so long as they can help it.

This sort of deadlock brings punishment,

but not always to the people who deserve it most; and, worse yet, it brings danger.

Farm-lands also continue to rise; but, while speculation in these is indulged in, the main cause yet is probably the pressure of population. Still there is danger that the limit of economic value will be passed in this kind of land also.

These are hard tendencies to deal with and to correct. You can't very well treat a whole community for a particular kind of craziness. But every man can for himself use what influence he has to prevent the crime of such land-speculation as may bring a period of stagnation and then the inevitable period of very rude adjustment. Perhaps the craze is not bad enough nor widespread enough yet to warrant acute fear of such a time of folly as we have more than once passed through. But it will do no harm to be careful and to encourage one's neighbors to care.

SOCIALIZING COUNTRY LIFE

ON THE 17th of last December, 108 boys and girls from 23 counties of North Dakota gathered at Fargo for the third annual North Dakota Boys and Girls' Institute. They were the winners of county prize contests for corn growing and potato raising and bread making and butter making during the year — the winners over 19,000 competitors. The expenses of most of them were paid by the county commissioners of their home counties.

At Fargo, the authorities of the State Agricultural College took charge of them; lodged the girls in the college dormitory and put the boys in safe quarters about town. Then the college people set about to give the children three days of pleasure and inspiration. They provided moving picture shows, basketball games, and band concerts for recreation; and talks on dairying and fruit growing and the care of horses for the instruction of the boys, and talks on domestic science for the girls.

At the same time the first annual Country Life Conference for the grown folks was in progress. County superintendents of schools, country preachers, and farmers and their wives attended its sessions. They discussed forms of country life entertainment as a means of socializing the rural communities. This subject was illustrated by a demonstration by a real country band that had proved to be a source of pleasure and sociability to its neighborhood, and by an amateur dramatic performance of a kind that could easily be utilized in any farming district. Other subjects that were discussed were these: the country home, the beautification of the home grounds, the country church, the country library — and the country store. And, between the sessions of the conference, the grown-ups joined the children in enthusiastic enjoyment of the social recreations.

These meetings, and their like, do a world of good. They bring together an earnest group of representative country folk to discuss the problems of rural life in an atmosphere of practical scientific knowledge and with the aid of college and Government specialists; and they emphasize the social element of agriculture as it needs to be emphasized if country life is to be made more worth living. And to the children who attend, and their thousands of competitors who rightly envy them the opportunity to attend, they dignify and make attractive the art of cultivating the soil and of making homes on it.

MONOPOLY AND CHEAPNESS

THE WORLD'S WORK recently expressed the opinion that the practical monopoly of the Standard Oil Company had been reduced and the way opened for other oil companies — without doing damage to the oil business.

This opinion has brought from a user of gasolene the query, "What does it matter, since the great consuming public fares no better? Last year I paid 9¾ cents a gallon in 60-gallon purchases. This year I pay 16 cents. If the consumer does not receive the result of the breaking of the monopoly, may it not as well remain?"

And the same correspondent asks similar questions about the lowering of certain railway rates (with the retention of others) and similar failures of trust-breaking to benefit the consumer. "All which leads

me to ask what you think about this kind of legislation and litigation?"

This is too comprehensive and too difficult a question to answer in a general way. Every case must be judged on its own merits. If the Standard Oil Company is really prohibited and effectively prevented from hindering competing companies doing a successful business — as it is understood that it is — then, so far as the law is concerned, competing companies may come into the field. That is as far as an anti-monopoly law can go or ought to go.

Of course, the hope and expectation, under usual conditions, would be that the products of any monopoly might then become cheaper to the consumer. But this would not necessarily follow. For there are many things, besides monopoly, that go to the making of prices. In the case of gasolene, for example, it may be that its enormously increased use in the ever increasing number of gas engines is sufficient to cause an increase in price. To what extent this be true, the WORLD'S WORK does not know. But the point is, while cheapness to the consumer is desirable, government and law cannot bring that about. All that they can do is to prevent persons and companies (so far as possible) from artificially making prices. If this can be done — and it is yet done very imperfectly, of course, and in very few commodities — competition and the consumer must at last take care of themselves. The belief is that in the long run they will.

A HOUSEWIVES' LEAGUE

IN 1910, Mrs. J. W. Ellms organized the Hyde Park Housewives' Coöperative League among her neighbors in that suburb of Cincinnati. The purpose was coöperative buying of household supplies. The method of buying and delivering was simple. The officers of the League dealt directly with the farmers and bought apples by the barrel and beef, poultry, butter, and eggs in similar wholesale quantities. They bought carload lots of potatoes and dry groceries. These supplies were all delivered to a distributing centre, the cost of freight, etc., being prorated, and were carried from that place to the members' homes by the members. All transactions were in cash. Typical savings are indicated by these quotations from one report of the League:

	RETAIL PRICE PER POUND	LEAGUE PRICE PER POUND
Sugar	6 cents	5½ cents
Pepper	80 "	39 "
Cocoa	50 "	42 "
Baking Powder	50 "	30 "
Rice	10 "	6 "
Prunes	18 "	13½ "
Corn Starch	10 "	7 "

The fundamental rules and principles of the League are set forth in Bulletin No. 1, issued when it was first organized.

It reads as follows:

1. Visit wholesalers and jobbers and ascertain wholesale prices on food stuffs. Also get in touch with producers as far as possible and buy directly from them.

2. Buy in large quantities, that is, in barrel and case lots, since the larger the quantity the less will be the cost.

3. Have all orders shipped to one place, preferably the home of a local Director.

4. The Director must own reliable scales and measures and keep an accurate account of all goods bought, also pay all bills incurred by her centre.

5. Every month the local Director shall appoint a committee of three women to whom she shall submit a record of all expenditures and receipts together with original bills for examination and approval.

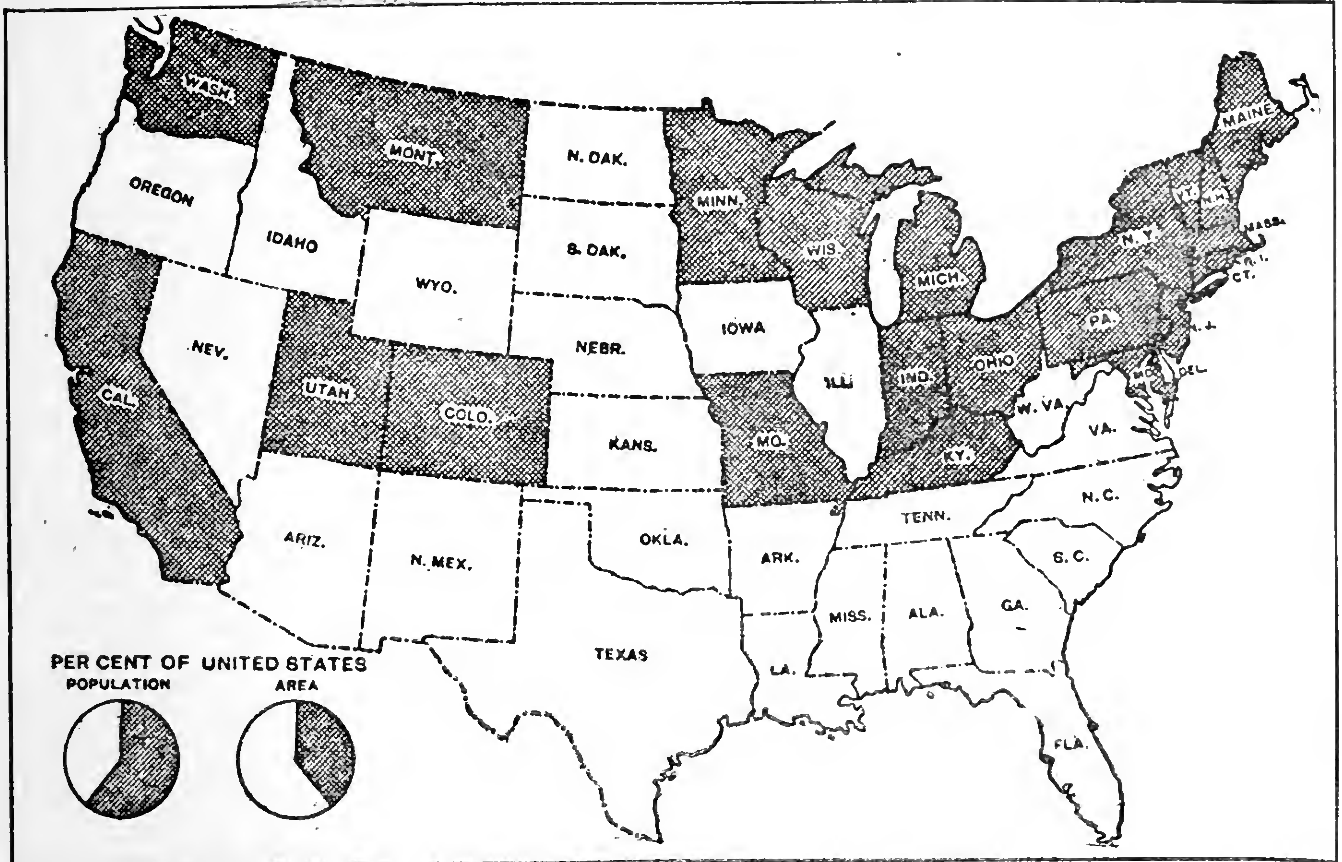
6. Every member participating in any purchase shares, proportionately to the amount taken, in the cost of freight and express charges.

7. Every member must agree before her order is taken to pay *cash* for her portion of the order when received.

8. Members failing to take their orders when delivered shall forfeit their portion, the same to be sold by the Director in any way she sees fit to reimburse herself.

9. Goods delivered by the Director without payment shall be delivered on her own responsibility, and should she fail to receive money due she should have recourse to the usual process of law to obtain settlement. Neither the League nor its officers shall hold themselves responsible for the debts incurred by local centres or their directors.

Branches of the League were soon formed, and these were federated into a



ONE REASON WHY PUBLIC HEALTH AGENCIES ARE NOT MORE EFFICIENT

ONLY THOSE STATES WHICH ARE SHADED REQUIRE THE REGISTRATION OF DEATHS, THE FIRST STEP IN AN ACCURATE STUDY OF DISEASE

National Housewives' Coöperative League. The National League has issued several bulletins, notably No. 2, which suggests a list of household supplies for winter use and the proper quantities to order for a family of four persons.

The work of these Leagues is a practical step toward lowering the cost of living by right economic methods — as one of the bulletins phrases it, to "aid the housewife so to manage her home that she will not have to live from grocery to table."

THE BIG PUBLIC HEALTH PROBLEM

THERE are approximately 680,000 needless deaths a year in the United States and, proportionally, probably more of them happen in the smaller towns and cities than in the great centres of population, where necessity forces a more efficient health service. As a rule the smaller cities, the towns, and especially the country are yet without an adequate health service.

People everywhere are, however, beginning to learn that one of the most fruitful tasks for the promotion of life, liberty, and the pursuit of happiness which can be done in these United States is to clean the country so that no one can be sick except by his own personal transgressions against right living

There is now a Federal Health Service capable and willing within its limitation of men to show any county or town how to be healthful. They can guide, direct, and encourage better conditions, but the work has got to be done "from the bottom up," by the people themselves. The key to rural health is the county health officer, who ought to be paid a decent salary for his full time and forbidden to practise privately — a man who will not wait for epidemics to come, but who will grasp such problems as are presented by the milk and water supplies, soil pollution, the eradication of flies and mosquitoes, the cleaning-out of small-pox, the hookworm, and the like. Such a man must work with the schools, so that no child shall grow up with a dangerous ignorance of right living. A new standard and conscience of health can be set up in a single generation. This fundamental work has been begun.

There are now county health officers in half a dozen states, perhaps not fulfilling all the possibilities of this great office, but at least making a beginning.

Until there are such capable officials throughout the country, we shall continue to have hundreds of thousands of deaths from preventable causes. We shall, in fact, never even know how many persons die. For our vital statistics cover only a part of our territory. The map on the preceding page shows how large a field is yet uncovered — even in the proper recording and reporting of deaths.

THE POWER TO PARDON

GOVERNOR DONAGHEY, of Arkansas, pardoned at Christmas 396 prisoners as a rebuke to the convict-labor system of that state. Perhaps he was justified in using any instrument within his grasp for such a purpose. Yet the pardoning power was never meant to be used as a means to over-ride legislation; and its use in this case is not likely to be effective, except in so far as these particular 396 men are involved. Nevertheless Governor Donaghey's act was far more excusable than the pardoning of Morse by President Taft, of Patrick by Governor Dix, and the numerous exercises of clemency by Governors Blease, of South Carolina, and Comer, of Alabama — so far, that is, as the public knows and is able to judge.

It is one of the worst faults of the pardon prerogative that it is usually exercised for reasons unknown to the people. When the Governor of New York let the condemned murderer of William M. Rice out of prison, he did not inform the people (whose officers of justice had never had the slightest doubt of the condemned man's guilt) of the considerations which impelled him to pardon. This is the attitude usually taken by a pardoning governor.

Now, what place in a republican government is there for a personage so exalted that he can at his will over-ride the processes of justice? Is it not a wrong kind of power to give any one man? There is no more superstition in believing that the touch of a king's hand will cure the scrofula than in believing that a governor possesses any mysterious faculty which enables him wisely to supplant justice with benignity. A proposal to give a governor the right to put to death would be received with amazement; yet the right to put to death is no greater than the right to grant life, and the responsibility involved is no greater. Why should the one power long ago have been taken out of the hands of kings and the other still be left in the hands of governors?

It may be that there is need in the mechanism of justice for some recognition of an emergency justifying the setting aside, at least for a period, of conclusions reached by ordinary judicial processes; and it can hardly be denied that the reprieve has often been of real value in the ultimate doing of justice. It is even true that free pardon has sometimes been the best way of righting injustice. But it is not necessary to lodge this power in a single man. Those states are wise which have established pardon boards which share with the governor the responsibility of setting aside judicial decisions.

HONOR AMONG CRIMINALS

COLORADO, Oregon, and Arizona are no longer alone in the effort toward a new theory and practice toward convicted law-breakers. The newest prison in one of the oldest states has adopted the honor system and is carrying it out with success.

At Great Meadow, N. Y., about 400 convicts work on a thousand-acre farm that is unenclosed except by ordinary fences. They plow and reap, they maintain a nursery, they ditch, fence, make roads, lay concrete walks, they quarry, they raise sheep, pasturing them on the far side of a mountain. One prisoner, a life termer, entirely unguarded, spends his time raising white Leghorn chickens; after fifteen or sixteen years of confinement at Sing Sing, he is very proud and happy in his new freedom.

The Great Meadow prisoners have their ball ground — half a mile from the prison building, on the edge of an inviting wood. The warden often umpires the game, and

thus far the brave man has escaped with his life. They have their band; they are allowed to smoke; they have recreation hours, when they practise ball, toss quoits, box, and romp, for all the world like a lot of school boys. The universal testimony is that they are a cheerful, hard-working and contented lot. One of the best evidences of the success of the plan is given in the order which they maintain, the quiet discipline which they enforce among themselves, when they have left the out-of-doors and returned to the prison house.

True, the Great Meadow convicts are not left utterly unguarded. There are a certain number of guards who are supposed to carry revolvers, but their number is so small that they could do little or nothing to prevent either leave-taking or mutiny. But thus far only two prisoners have attempted to escape, though the remote corners of the farm and the far-stretching sheep range give constant opportunity and temptation. It is true, also, that the inmates are in a sense a selected class, all being first offenders, and an unusual proportion being near the end of their terms. Nevertheless, Great Meadow adds another demonstration of the possibilities that lie in a new system of penology.

AN UNPARALLELED EDUCATIONAL RECORD

THE usually accepted ratio of college students to population in the United States is 1 to 1000; that is to say, one tenth of 1 per cent. That one person in a thousand (counting men, women, infants, and old people) should attend college has been regarded as a large enough proportion; and no doubt it is, if "attending college" mean what it generally meant twenty years or more ago — the routine cramming of formal information which was soon forgotten.

The University of Wisconsin sends out a calculation to show that that great school alone has given instruction to one person in every ten in that state. This vast army of recipients of direct instruction consists of:

10,000 graduates and regular students scattered over the state; 2,000 farm boys who have attended the short course in agriculture; 3,000 dairy course students; 8,000 correspondence students who have enrolled in the Extension Division; 155,000 annual participants in the Farmers' Course and Farmers' Institutes conducted in various parts of the state; 125,000 persons who have attended lectures given by representatives of the Extension Division of the university; and 7,000 citizens who have made use of the package libraries sent out upon request by the University Extension Division.

This is to say that the University of Wisconsin has done a hundred times better than the average college.

A NEW INDUSTRIAL NATION

ONE of the most remarkable results of the modern utilization of electric power is the changing of Norway into an industrial nation. This far northern country, with a rugged and difficult topography and a niggardly soil, had bred a bold and resourceful and patient people, who have held their own in the world largely by their daring and skill as seamen. They had looked forward to small part in the new era of worldwide industrial development save as carriers of commerce that more richly favored peoples originated.

Then came Dr. Samuel Eyde, a Norwegian who had studied his profession of electro-chemistry in Germany and who was co-inventor of the process by which nitrogen is precipitated from the air by the use of high-powered electric currents. Backed by French capital, in July, 1903, Dr. Eyde established a small factory at Frognerkilen and employed two laborers and two other men to handle the product of a 25 horse-power furnace. In less than ten years two plants have grown from this beginning: one at Rjukan and one at Notodden. They use 200,000 horse-power and require 1,340 laborers and 143 other employees to handle their product which is now 100,000 tons a year. This capacity will soon be doubled by extensions now under way. Where less than 600 people lived ten years ago, now more than 10,000 have their homes in the two towns.

The nitrogen obtained from these plants not only creates a great industry in commercial fertilizer, but it will form the

basis of other industries that depend upon nitrogen and its by-products, such as the manufacture of guncotton dynamite and of nitrate of ammonia, which is the principal ingredient of many of the explosives that are used for submarine mines. Some of these industries have already been founded in Norway.

And these things are only a small utilization of the industrial possibilities of Norway. Though that country has no raw materials, it has vast resources of accessible electric power for manufacturing plants. Thirty million horsepower now run to waste and other millions can easily be added to these possibilities by dams that can be built to store more power. Dr. Eyde has pointed the way for a commercial regeneration of Norway that may make it a rival of the greatest manufacturing nations. The history of England's ships and England's coal may be repeated in Norway's ships and Norway's electric power.

An apparently little discovery and the chief leadership of one man may thus change the whole character of a people's industries and their relative place in the world and their history.

DIFFICULTIES OF THE PUBLIC SERVICE

AT THIS time every fourth year, the man who is about to become President of the United States, unless he succeeds himself, is looking here, there, and yon for men for high places in the public service. Politicians and delegations of influential citizens visit him to "present" the names of party workers or able statesmen. The newspapers give their ever-ready aid in daily suggestions. There are more "favorite sons" and hitherto unknown great authorities on all Departments of the Government than anybody ever dreamed of. If one looks at it as a mere spectacle, it is very amusing. Politicians pay their political debts by "presenting" gentlemen who have done them good local service during the campaign. Statesmen out of jobs get newspaper notoriety as prominent candidates for this important post or that. Rich men appear on the horizon with suddenly acquired fitness for diplomatic posts. As a show, it is entertaining for a month or two because of the appearance of political ambition in men whom nobody had previously thought of as public servants.

But, if you consider it seriously, as we do consider it after appointments are made, this fact forces itself on you: how inadequate both in pay and in honor are the rewards of high public office in the United States! A place in the President's Cabinet surely is a high and honorable post. But a man who accepts it must move to Washington, which is an expensive city to live in, and apply himself to a very difficult and generally thankless task about which he knows little or nothing — for $12,000 a year. He must live like a gentleman — like an official gentleman at that. This means a loss of money, apart from the falling away of his income at home from his profession or business. Except in some dramatic crisis in the affairs of his Department, he works without "glory" — that is, at an endless series of routine duties which he can seldom do with the greatest efficiency because of the necessary red-tape of official life. You cannot even call the names of all the present members of the cabinet. Unless he be uncommonly prudent, he eats too many rich dinners. Less healthful, less well-to-do, less young, he goes out of office in four years, generally unfitted for the duties of private life.

Yet it would not be wise to make these positions lucrative, nor would it be wise to make them permanent in tenure. It would be wise, if it could be brought about, to make official life at Washington less costly and simpler. But this is practically impossible.

The result is that the Government fails to secure the services of some strong men that it ought to be able to command, and it gets the services of many that it could dispense with without loss. But, when all the difficulties are taken into account, the average ability is reasonably high, and reasonably commonplace, and reasonably efficient — generally merely reasonably good or bad — seldom very bad, seldom very good. But of such is our democracy.

RICH MEN AS AMBASSADORS

THE wish for a change from merely rich men as ambassadors and ministers has been made in all quarters since the election; and a very proper wish it is. A facetious view of the subject would suggest that most of the Democratic gentlemen who wish to represent their country at foreign capitals are poor men. But there is a serious side to it.

Of late years it has become almost the rule that the most important ambassadorships should be given to rich men, in some cases because they made big campaign contributions (if not for this reason, for what reason?). In other cases, the expense of maintaining establishments on a level with other nations far outruns the salaries that we pay; and, for this reason, of the men eligible the rich man has had the preference.

But, whatever the reason, the gradual and continuous tendency toward richly kept embassies is out of keeping with the American idea. The American idea may, in this matter, properly be called simplicity and efficiency. A plain, dignified house, with a real man in it, is better than a palace with a mere official. Revedy Johnson, Charles Francis Adams, John Lathrop Motley, James Russell Lowell, Thomas F. Bayard—these are the types of men who have properly and with great distinction represented the United States in European capitals; and they did it right well. The very simplicity of their ways of life — their very poverty, if you choose so to call it — was one important element of their success. It was as much as to say that the United States sent abroad men who were scholars and gentlemen and men-of-letters: it was the man that counted, not the house he lived in nor the servants he hired nor his entertainments. There have, of course, been rich men who were scholars and men of personal charm. But the great old-time distinction of American diplomacy was not the distinction that wealth gave or helped to give.

There was a movement several years ago to persuade Congress to buy suitable residences for our ambassadors at the chief European capitals — a worthy move that ought to succeed. The best posts, too, might very well carry larger salaries. We are parsimonious in small matters. But the lack of proper governmental provision is not a sufficient reason for the appointment of men only or mainly because they are rich men. It is a bad day when this shall be true about any public position. No rich man has been elected President since Washington, and no rich man could be. This may not be fair to the rich, but beneath it there runs a rather wholesome quality of American character. Why should any rich man hold a lesser governmental post merely because of riches?

PROFITLESS DISHONOR

THE controversy about the Panama Canal tolls does not down. Congress passed an act that gives an advantage in tolls to our own vessels engaged in coastwise trade. The Hay-Pauncefote treaty with England, under which the Canal was built, distinctly says that no discrimination shall be made between the ships of different nations. Some men and Senators believe that exempting American coastwise ships from toll is not such a discrimination. Yet to the straightforward lay mind, such discrimination seems plain. Certainly a ship leaving Portland, Me., for Portland, Ore., paying no toll, would have a decided advantage over a ship leaving Quebec for Vancouver, paying toll.

But, more important, we ratified the Hay-Pauncefote treaty. Good or bad, it stands; and the main question is the sacredness of a treaty. Mr. Joseph Choate worked with Mr. Hay in negotiating the treaty and he recently declared in a speech in New York that we did distinctly waive our right to administer the Canal with discriminative rates. We shall find ourselves compelled to submit the question to arbitration unless Congress repeals this toll-rate.

And the simple fact is, that the passing of American ships, toll-free, through the Canal will benefit nobody but a few shipowners. It is quite true that the Government of the United States built the Canal with money paid by the American people

It did not, however, build it with money paid by American ship-owners. The American people gave that money — and not for the special benefit of half a dozen steamship companies. For years the steamship interests have been straining every nerve to persuade Congress to grant ship subsidies. The suggestion is repugnant to the American principle of fair play and the repugnance has been so warmly shown that Congress has not dared to pass a ship-subsidy bill — until now, when, under the outcry of false patriotism, it has been persuaded to repudiate a solemn pledge and vote a ship-subsidy.

It would be a pity to do a dishonorable thing for a foolish reason. If we have determined, after all these years, to subsidize steamship lines, let us do it in some way that will not require the repudiation of an international covenant.

THE PHILIPPINES AND THE FACTS

ONE of the first subjects with which the new Administration will have to deal is the subject of the Philippines. The Democratic platform declared in favor of an immediate announcement by this Government of its "purpose to recognize the independence of the Philippine Islands as soon as a stable Government can be established, such independence to be guaranteed by us until the neutralization of the Islands can be secured by treaty with other Powers."

A bill drawn by Congressman Jones, of Virginia, is pending in Congress and is reputed popular among Democrats. The Jones bill promises the Filipinos independence in eight years, and in the meantime gives them a much larger share in the Government than they now enjoy. When, from this twilight period, the new nation emerges into the full day of independence, in the year 1921, it will find itself possessed (so benevolent is the Jones proposal) of a complete and complex system of government modelled after the government of the United States.

It is unfortunate that the general policy of ultimate Philippine independence should be, even for a moment, bound up with a provision so foolish as that of forcing upon an Oriental people a very complex government invented for a particular people of the Occident. The genius of the West is not that of the East; highly developed institutions can not be bodily transplanted in the other hemisphere and be expected to flourish. Democracy will never organize itself in China or India or the Philippine Islands just as it does in the United States. The people of each land must be trusted to develop and organize their own society; nobody can give them a government — they must make their own. So much of the Jones bill is clearly wrong.

As to its chief proposal — to give the Philippines independence in eight years — are we certain of the wisdom of that? Is it not the simple fact that we do not know enough about the Filipinos to form an intelligent opinion concerning their capacity for self-government or even to be sure that they desire it? Neither the people of the United States nor their Congressmen have more than the dimmest and most confused ideas respecting life in the Islands. Some of us believe the Filipinos (we class them all together) to be only half-civilized. Some of us, on the other hand, look upon them as another nation of Eastern Yankees, very much like the Japanese — highly cultured in their own way, ingenious, poetical, artistic, and kindly, with a small percentage of barbarians, it is true, in the least accessible portions of the country.

What are the facts? How shall we learn the facts? The descriptions afforded by the books, by the stories of military officers, and like sources of information are in disagreement so hopeless that no conclusions can be gathered from them.

Why would it not be a good idea, before committing ourselves to any definite programme, to send out to the Philippines a few disinterested investigators instructed to study conditions with a view to throwing light upon the problem of our duty? It is a sacred duty, one not to be lightly discharged. We have no right to keep the Filipinos in subjection if they are fit for freedom; we have no right to give them freedom if freedom would be only a curse.

A NEW MONROE DOCTRINE

A REMARK made by Rear-Admiral Chester has drawn renewed attention to the suggestion that a definite statement of the Monroe Doctrine be made by the republics of the Western Hemisphere acting in concert. What we call the Monroe Doctrine is the declared purpose of the United States to permit no European Government to acquire more American territory. But the Doctrine needs definite statement. In seventy-five years it has undergone an evolution that extends its purport far beyond the language of Adams and Monroe. It needs development on the positive side, having been, up to the present, thought of chiefly in its negative aspect. It is popularly conceived as a principle forbidding European Powers to interfere in this hemisphere. Few consider that if we assert a right, we assume a corresponding duty; that if we prohibit other Governments enforcing just claims in the Americas, we take the responsibility of doing it ourselves. There is no escaping the fact that if the United States tells Europe that it may not deal with Latin-American countries as with other nations of the world, we make ourselves responsible for them. If we say to Germany: "You must not land troops in Hayti to execute that justice, correct that delinquency, or punish that insult if you mean to acquire any territory," we are saying to Germany: "You must look to us to do it."

But how can the positive aspect of the principle be developed?

Is the United States Government to announce that it will answer for the good behavior of all the rest of the American republics? To do that would be to bring down upon our heads the bitter hatred of the hemisphere; Nicaragua, Santo Domingo, and the rest of the delinquents are willing enough to hide behind us when Europe threatens punishment for their misdeeds, but they indignantly resent any intimation from us that it is our duty to do anything more than stand between them and such punishment.

It might clear the air to make the Monroe Doctrine and its implications the subject of a compact between all the American republics — a compact in which it would be made plain that a guarantee against invasion from abroad has its necessary corollary in the right of the guarantor to enforce good behavior; and in which, further, it would be made plain that the maintenance of the Doctrine is a responsibility upon all America and not merely upon the United States. The time is coming when our unsettled, trouble-making neighbors should be required formally to acknowledge that the Monroe Doctrine means something more than mere protection from European nations, and when the tranquil, self-respecting republics of the class of Argentina, Chile, Brazil, and Venezuela — not to exhaust the list — should be convinced of their equal interest in the defense of the principle and be asked to assume a share of responsibility for its execution.

THE MEANING OF THE BALKAN WAR

THE Balkan Allies' war against the Turks is another step in the spread of the American idea of government — that it should be with the consent and for the benefit of the governed. European Turkey, except for the Vilayet of Adrianople and the country immediately around Constantinople, is inhabited chiefly by a non-Turkish population. There is no reason why Turkey should rule them, for the Ottoman Government can not plead either a benevolent disposition nor efficiency in administering their affairs.

Out of Turkish control these people will not have a very complete hand in the management of their affairs but they will at least have a Government by men of their own race.

The Russians have a Duma — a parliament in form at least; Persia has struggled for popular rule. Portugal has become a republic, the Chinese people are trying to take control of their own business. All over the world the common man is trying to rule himself, and little by little he is gaining that right. When historians write the story of the last fifty years, these popular movements will be the one great fact of the time; and the war against

the Turk will be chronicled as one of the most dramatic incidents in the progress of the general movement.

There yet remain subject races whom their conquerors or rulers have come to regard as inefficient — the Filipinos, the Indian peoples, the Africans. Some of these — especially the Filipinos — will develop enough initiative and ability in organization and constructive genius to stand alone at some time without blotting the world's map and being a hindrance to trade and a menace to health.

II

According to a rough estimate of the New York *World*, the cost of the Balkan War up to Christmas was about $70,000,000. Turkey spent approximately $40,000,000 and the Allies about $30,000,000, Servia and Bulgaria bearing the brunt of the expense. The outstanding common stock of the United States Steel Corporation is $508,302,500.

There are about 4,000,000 non-Turkish people in what was Turkish Europe. It has cost the Allies in actual warfare about $7.50 apiece to free them. If final figures should bring the total to twice that sum is it not perhaps the cheapest way to the emancipation of these people?

The Turks (up to Christmas) spent $40,000,000 in trying to keep their hold upon provinces that yield them $30,000,000 a year in revenue. To succeed they could have afforded to spend a larger sum.

In killed and wounded the Allies lost approximately 115,000 men. Of these certainly not more than 30,000 were killed; the rest were wounded or sick. Our coal mines have killed 30,000 men in the last ten years. Our railroads kill that many every five years.

If it were given to the people of the allied countries in their calmest moments to vote whether they would sacrifice 30,000 men, have 85,000 wounded and sick, spend $30,000,000 or twice that sum, and undergo the disturbance of war, to free 4,000,000 of their blood relations from the tyranny of the Turk, there is little doubt of their answer. Nor is there any doubt that the great majority of the people of Macedonia welcomed the war.

But this was not all the cost of the Balkan War. The great powers of Europe mobilized their armies. Russia spent as much in mobilization as the Allies did in the conduct of the war up to Christmas. Austria's expense was next. France, Italy, Germany, and to a small extent England, made preparations for a possible international conflict.

It is unfortunate to have to say — in this piping time of peace — that any war is justified, but it is hard to draw any other conclusion concerning a war which was waged in the interest and with the consent of those who paid the bills — and it is doubtful if by any other method these 4,000,000 people could have been started on the road to self-government as cheaply as by war. They themselves have been perhaps the chief sufferers. One harvest has been ruined by war.

WAR AGAINST WAR

THERE has come a decided change of tone in the voices of the advocates of universal peace. For years there have been gentle souls who have deplored the horrors of warfare and painted in soft colors the beauties of peace. Yet wars have not ceased. The horrors have grown more horrible. And now there has been born the conviction that the way to stop war is to make war upon it.

Those who listened to the Baroness von Suttner on her recent visit to this country have realized how terrible a moral seriousness has settled on those who hold human conflict a monstrous crime which must be resisted to the last degree of passionate effort, and whose authors must be treated as enemies of mankind. It is an idea as yet novel in American ears that a candidate for Congress should be fought because he is in favor of more battleships, or that boys should be taught that a soldier's uniform is a disgrace.

Little endangered as the peace of America is, we have not kept up with the anti-war movement that is one of the most significant facts of the present day in Europe. Internationalism has become a power which the Governments of Europe do not quite know how to measure. A

million and a half of Transport Workers have gone into an international organization — Austrian and French railway servants, French seamen and dockers, German railwaymen, dockers, sailors, and lightermen, Dutch dockers and seamen, Italian railwaymen, dockers, and seamen, Spanish and Portuguese dockers, Russian seamen and dockers, Finnish dockers and seamen, and British dockers and seamen. Suppose they were to refuse to carry men, supplies, ammunition — how could war go on? The navies of Europe are not free from Socialism. What happened in Russia might happen elsewhere. The Internationalists keep every British ship supplied with anti-war literature. German barrack-rooms are crowded with Socialists, and army post after army post in France has made demonstrations against war.

Within a few months in Paris, Berlin, and London, demonstrations of workingmen, numbering each a hundred thousand, have protested against war. In France the General Federation of Labor threatens a general strike the day war is declared by the Government — a strike designed to paralyze all industry and transportation. Prague, Pilsen, and Vienna have seen thousands marching in protests against Austria's preparations for conflict. The mere danger of war has prostrated business in the Austrian capital as a like danger two years ago demoralized Berlin and Paris.

The Balkan War, being racial and religious, was popular; the people made it rather than the Government. But things are different in Western Europe, and the opening of hostilities by Germany, France, or England might be a signal for a war against war that might undo the most perfect plans of European governments and generals — *might be*; for on such a subject no prediction can be made with great confidence. There will be more wars, wars in which race pride, national pride, and the reasons or passions that move large bodies of men will rush armies into battle. But it is certain that it is not so easy to bring on a war for other reasons as it once was; and this new fight for peace is a strong force in the world and it may become still stronger.

GETTING BOOKS TO THE PEOPLE

THE energy and courage of Miss Mary L. Titcomb are responsible for perhaps the most useful automobile in the United States. In the first six months of 1912 it circulated 28,000 books to the people of Washington County, Maryland.

For patient years Miss Titcomb had been trundling knowledge about from door to door through the mountains near Hagerstown. As a librarian of that city she had conceived the unique idea of carrying books to the remote cabin dwellers who wouldn't come to the books. Her famous book wagon — a sort of cupboard on wheels, something like an old-time New England meat-peddler's cart — and the war veteran who drove part of the time for Miss Titcomb, were a familiar picture to the mountain dwellers. It won its way into the hearts of the lonely, ignorant people. They had been too indifferent, too hard-worked, to seek the traveling library stations, even though these were conveniently placed; but when Miss Titcomb drove up to the very doors even the stubbornest enemies of literature gave in. What that droll little wagon did to brighten isolated homes and to lead young people into better paths can hardly be estimated.

But the wagon was small, and the horse got tired on the steep roads, and it took four days to make a round that didn't begin to take in all the people Miss Titcomb wanted to reach. The population of Washington County outside of Hagerstown is 30,000, and these 30,000 people are spread over 500 square miles minus the small section covered by Hagerstown itself.

Naturally, Miss Titcomb wished for a motor instead of the old horse and wagon. As usual it took destruction to bring about rebuilding. A train ran over the wagon and left nothing but splinters and hope.

The hope was fulfilled, for the destruction of the wagon paved the way for the motor, which now carries volumes from Hagerstown, the fount of supplies, over twenty-four routes which cover Washington County. Its unique mission, and the vital part of its work, is to distribute books

personally, so to speak, at remote doors. For the first six months of 1912 this door-to-door circulation record amounted to 2,103 volumes.

The door-to-door work has led many a mountain dweller to become a patron of the book stations. There are sixty-six of them in the county besides the country schools; and the schools are likewise supplied by the book motor. When it delivers books to the county schools, it carries along the school librarian, also, that she may get in touch with the teachers. But there still remains a tremendous amount of the original door-to-door work which was the motive of the old wagon, so that in every sense it stands as a medium of communication between Hagerstown, the library centre, and every reader, man, woman, and child in Washington County. The centre possesses 23,609 volumes; it is something for one motor to stand between these and 30,000 country folk, bringing them in touch! This is its ambition and, to a great extent, its accomplishment. The record of circulation for the latter half of 1912 was about a third larger than for the former half. There is no danger of the motor giving out for want of funds, for it is now acknowledged as an established member of the library corps, and supported from the library's fund, which consists of an endowment aided by an annual appropriation secured to the library by the legislature — $1,500 from county and $1,000 from city. So the motor has a secure basis, in an infinitely useful work well done. It means a wider mental vision in Washington County in the next generation.

II

As the distribution of good books is a public service, the Indiana Reading Circle is a public benefactor. It has taught a whole people to want to read. Twenty-five thousand books a year it distributes to the teachers of Indiana and 50,000 to the children; and these books are carefully selected. One good book calls for another. That is how this simple yet wonderfully effective organization has become so potent in Indiana.

It began years ago. It was the product of the great Chautauqua movement which swept through the country, particularly the states of the Mississippi Valley, thirty years ago. The suggestion came up in a meeting of Indiana teachers in December, 1883. The Indiana Teachers' Reading Circle was started and has been in successful operation ever since. Its board of directors select two books a year and from 12,000 to 14,000 teachers get both of them, which gives a definiteness and aim to at least a part of their reading.

Out of this grew the larger work, the distribution of selected books to the school children. In 1887 a Children's Reading Circle was begun. It has since put into the hands of Indiana children more than a million good books.

Every year twenty books are selected, suitable for all the grades of the common and high schools. A low price is secured from the publishers and books are sold to the children and to the schools with only enough added to cover the cost of the work. The Circle makes no money. Its labor is for the public good.

And it has accomplished immeasureable good. The million books that the society has sold have awakened and inspired the minds and imaginations of thousands upon thousands of country children in Indiana — and grown people, too. They have led people who never read before to read not only these books but to seek others. There are hundreds of little libraries in Indiana that have grown out of the collection of the Reading Circle's books. There are many schools that look upon the "list of twenty" as much as necessities as desks and blackboards or text books. The Circle's influence permeates the whole state and its fame has gone abroad.

Not long ago Mr. J. Walter Dunn, the secretary of the Children's Reading Circle, received a letter from a teacher in Havana, asking how to organize such a circle, and at the same time came a similar letter from Alaska, and a third from the City of Mexico. There are many places nearer Indiana than these where a Children's Reading Circle would help to enlighten the coming generation and add to its pleasure and its power.

THE WAY OF THE STOCK EXCHANGE

THE testimony of a few members of the New York Stock Exchange before the Pujo Committee at Washington presents again to the public mind the palpable fact that the New York Stock Exchange needs regulation and needs it badly. This evidence also, in some of its details, reveals clearly the small and narrow policies and views under which the Governing Committee of that Exchange carries on its operations.

The New York Stock Exchange is a sort of club that is permitted, by a loose public assent, to be the one great market in this country in which all men may deal in certain stocks and bonds which are listed on that Exchange. It is a great business institution whose transactions run up to a total of $19,600,000,000 in stocks and $800,000,000 in bonds a year. Still it has never been deemed necessary, and probably is not necessary, to regulate its operations and to amend its rules by law. The members of the Stock Exchange are permitted to carry on this great business under rules which they themselves set up.

In any such position, there is a clear and distinct understanding between the Nation at large and this group of one thousand men that the business will be so conducted as not to become a public nuisance, a public menace, or a public disgrace. Though the statute law takes no heed of the operations of the Stock Exchange, the people of the Nation are prepared to insist that moral law shall hold upon the floor of the Stock Exchange as well as in every other place in this country.

Therefore, it is shocking to the moral sense of the people as well as to the common sense of men who fully understand what the Stock Exchange is doing, that a man of the standing of Mr. F. K. Sturgis, formerly a president of the Stock Exchange and a member of its committees for more than forty years, should be led to remark in reply to an inquiry before the Pujo Committee:

"I approve of transactions that pay their proper commission and that are properly transacted. You are asking me a moral question, and I am giving you a Stock Exchange answer."

If that statement means anything at all, it means that the Stock Exchange undertakes to exempt itself not only from the operations of statute laws and from the obligations of an ordinary corporation organized under the law, but also from the operations of the ordinary unwritten moral laws that are supposed to govern business transactions in civilized countries, whether these transactions are carried on on the floor of the Exchange, or elsewhere.

In a broad way, the most severe indictment that has been published against the Stock Exchange is contained in the two sentences quoted above. If there is a difference between the business morals under which the gentlemen of the Exchange operate and the business morals under which other business men operate, that difference must be wiped out, or the people of the United States will wipe out the Stock Exchange itself in the course of time, just as any other long-standing offence to the moral sense of the people is certain, eventually, to be wiped out.

II

If this hearing has been productive of one or two general indictments of Stock Exchange methods and morals, it has also been productive of some more concrete definitions and illustrations of evils which have long been known to exist on the Exchange and in most of our other security markets, and which have also long been known to demand remedies.

The evidence of Mr. Sturgis, and more particularly of Mr. Harry Content, himself a past master of speculative business, and of Mr. Lewisohn, who was apparently fresh from a striking campaign in a newly listed stock, does not leave a good taste in the mouth. In fact, the answers of the Stock Exchange witnesses would give almost any outsider the impression that manipulation of stocks up or down, the employment of crossed orders on the Exchange (orders in which one interest arranges to buy and sell the same security merely to establish a price), and a tremendous amount of personal gambling on the rise and fall of prices, are

commonplace incidents in the ordinary business of the Wall Street market.

Wall Street men know that that impression is exaggerated. It is true that a very large part of the daily transactions represent practically pure gambling, that orders are put in the market by large operators for the specific purpose of changing prices up or down expressly to make profits out of less fortunate traders. That fact came out quite clearly in the evidence of several of these witnesses and does not seem to have been controverted by any one. It is accepted by all students of finance as an established fact.

To the man who understands the market even a little, the old question about the morals of selling stock which one does not own is not a particularly interesting question. It is in the same category as buying on a margin, in hope of a rise. If a man is going to trade in stocks for profit, he generally has to learn to trade on the short side of the market as well as on the long side of it, or he will ultimately leave in the market whatever he puts into it. If trading can be justified at all, however, under the rules of common sense, trading on the short side must be justified along with trading on the long side. A logical man finds it very difficult to distinguish the moral difference between trading for a profit on the rise and trading for a profit on the decline.

III

On the whole, there is apparently nothing new in the so-called revelations of Stock Exchange methods. There is, however, the fact that apparently hardly a single thing has been done by the Stock Exchange itself to curtail or eliminate those abuses and errors in the administration of this great public market place which were made quite clear in the report of the Hughes Committee some years ago and which are, as a matter of fact, very well understood by all business men who have even superficially examined or studied the business of the Stock Exchange.

One phase, which will probably be much discussed in the country as time goes on, is the answer to the question where the speculative markets of Wall Street get the money which is necessary to finance the tremendous operations of the market. Single brokers, testifying in Washington, declared that they lent anywhere from $5,000,000 to $25,000,000 a day on the floor of the Stock Exchange, these sums of money being supplied, as a rule, by the large banking institutions of New York and by three or four private banking houses which carry large deposits for their customers. It was also made evident that a substantial part of this lending is with the money of banks away from New York which dispatch their surplus funds to the New York market at a time when interest rates in Wall Street are high or when they themselves have nothing to do with their money at home.

It is an open question whether it is a good thing or a bad thing to have an open market where there is a constant demand for money and where such money can be lent safely, that is, on good collateral which can be turned over quickly in case of necessity. There is a good deal to be said on both sides of this question.

Probably the fact of most public interest is that funds of the people — as represented not only by the deposits in the five or six big financial banks of New York but also by the deposits of small country banks which lend in New York — are regularly and systematically used to finance the speculation in Wall Street as well as the legitimate commercial and financial demands of Wall Street.

To those of the public who did not know this to be a fact, it will come as somewhat of a shock; and to those who knew it in a general way, the details of such lending will afford, as time goes on, a more definite basis upon which to judge whether this condition of our banking system is beneficial or detrimental to the whole country.

It is probably from this point of view that the testimony taken before the Pujo Committee will prove valuable.

IV

The Committee's investigation has uncovered some of the abuses of Wall Street and has touched very lightly indeed upon the manifest benefits of an open market. No attempt seems to be made by anybody

to bring out the fact, for instance, that more than half a billion dollars of new capital has been raised in the Wall Street market during the last year or so for industrial companies in all corners of the United States, which would have found it extremely difficult, if not impossible, to raise that amount in any other way.

The New York Stock Exchange is, of course, on trial. It has done nothing as yet to justify itself, to explain away the abuse of its privileges through manipulation and open gambling, or to point out to the public that it does perform certain relatively useful and constructive functions. Perhaps in the course of time some man may be found in the New York Stock Exchange who has both brains and character enough to come before the public and tell the truth with a fair chance of being heard and listened to attentively. In the meantime the conviction is gaining ground not only throughout the country, but even more strongly in the minds of those who study these matters carefully, that the present Board of Governors of the New York Stock Exchange do not even grasp their own economic function with sufficient clearness to explain it to the public or to understand its limitations and its scope.

Therefore, there seems to be firm ground for the belief that the New York Stock Exchange will not regenerate itself, justify its continuance on the present basis, nor be able to attract again within its walls the general investment and securities business of the country which is being done more and more outside of the walls until its present administrative forces are discarded, and in their place a broader atmosphere is found within its walls to take up the task of regenerating its practices.

A WARNING WRITTEN IN OIL

THE negotiations began last summer. They were carried on, on the one side, by two large operators in oil and oil lands in Mexico and California. These gentlemen had something to sell. At the other end of the transaction was an old and well established banking firm with an excellent reputation, Messrs. William Salomon & Co., of New York. They wanted something to sell. The oil men wanted $10,000,000 in cash; and the bankers wanted to supply this cash for a substantial consideration.

So they got together. They agreed that the bankers should supply about $10,000,000 in cash and should receive in return $10,000,000 of preferred stock of a California oil company, and $10,000,000 of a total of $15,000,000 of common stock. This left the Western gentlemen $5,000,000 of common stock and supplied them with $10,000,000 cash.

Thus we find a single banking house holding $20,000,000 of securities for which it paid about $10,000,000. A banking house does not buy securities for investment. It buys them to sell again, and the best way to sell them is the easiest way, provided it yields enough profit. Therefore, this house began by taking in two other firms, both members of the Stock Exchange and both houses of good standing: Lewisohn Brothers and Hallgarten & Co. Apparently these two houses were taken in on equal terms just as though they had participated in the original purchase. This was done to give larger power in selling the securities to syndicates and to the public and not through any feeling of philanthropy toward them.

The next step, of course, was to organize syndicates. Apparently there were two of these, one to dispose of some of the stock in Europe and the other to dispose of the remainder of it in the United States. Of course, these syndicates did not get the stock at the original price. Each syndicate subscribed for $5,000,000 of the preferred stock at about 90 and for $2,500,000 of the common stock at 40. Thus we see that when these syndicates had completed

their subscriptions they had paid $11,000,000 in cash to the three banking firms and had received in return $10,000,000 of preferred stock and $5,000,000 of common stock, thus leaving $5,000,000 of common stock still in the hands of the three banking firms.

Thus the three bankers had made, up to this point, a profit of $1,000,000 cash plus $5,000,000 of common stock on the original investment of $10,000,000 in two months, less, of course, certain expense of carrying on negotiations, etc.

Now these syndicates, naturally, were composed of people most of whom were friends or business associates of the three banking firms. Moreover, when the syndicates were formed it was agreed that the banking firms should go to work and sell the stock for the syndicate members at a profit, if that were possible. Here, then, was the task that faced these gentlemen in the early fall of 1912, namely: to get rid of $10,000,000 preferred stock of the oil company and $5,000,000 of the common stock for the two syndicates and also to get rid of their own $5,000,000 common or such part of it as they wanted to sell at the best prices they could get.

Naturally the only way this could be done reasonably was to get the great outside public interested in this stock, work up enthusiasm over it, and invite the people to come .in and take it away. The first step in such a progress was entirely obvious and legitimate. The bankers caused to be prepared certain prospectuses, reports, and descriptions of the properties which described them in glowing terms and painted their prospects in bright colors. No evidence has been produced to show that these pictures were overdrawn and it is not at all improbable that all the promises made or implied in these descriptions will be fulfilled. This brief chronicle of a Stock Exchange episode is in no sense a criticism of this western petroleum company or an intimation that it is anything but a good, substantial corporation. The writer knows nothing about it except what he has read in the prospectuses, etc., and he learned many years ago that he does not "know" anything that he reads in such prospectuses.

This being done, the next step was to take the stock into the Curb market in New York so that the public, if they felt so inclined, might embrace it and take it away. Now a stock in the Curb market may be a very shy and retiring stock, seldom heard of and rarely traded in, or it may be a very active and boisterous stock, making more noise than any other issue in the market. Naturally it was ordained that this oil stock should be of the latter class rather than of the former. Otherwise, how could the public know that it was in the open market?

To Messrs. Lewisohn Brothers seems to have been allotted the task of making the new stock dance with exhilaration on the Curb. They succeeded very well. Apparently the stock became a prime favorite, not only with speculative houses that like to take a "flyer" in anything that looks active, but also with the public, more or less; with the result that the price advanced remarkably.

In the meantime, of course, selling was going on from all three houses privately, the prices being about the prices quoted on the Curb and showing handsome profits to the bankers. This is the quiet and unostentatious but extremely successful method of gathering profit known technically as "inside distribution." It means that the customers and clients of the banker are invited to buy and do buy on the solicitation of the banking house.

About the first of October a broader field was sought, and the stock was listed on the New York Stock Exchange. Lewisohn Brothers, having been successful on the Curb, continued to handle the stock on the Exchange, coöperating, of course, with the other houses.

Marvelous to relate, transactions in this hitherto almost unknown stock amounted in the month of October to about $35,000,000, or two and one half times the entire common stock issue of the company. Mr. Lewisohn has testified that a good part of this remarkable activity was due to public enthusiasm, but one of his clerks added some details concerning the very large transactions carried on in the stock by the bankers themselves. There are no figures to represent the proportion

of that $35,000,000 which represented public transactions and the proportion that represented "rigging" the market.

At any rate, the price shot upward to more than $70 a share. Then it began to tumble slowly downward. In December the directors declared a dividend; but the price still crumbled. Then the Pujo Committee in Washington put Mr. Lewisohn on the stand and read this story into the public records. The next day the stock touched 50.

Thus, it appears that within three or four months the bankers — aided by the great natural excitement of the people, and abetted by the complacency of the New York Stock Exchange governors, and helped by the banks of New York which accepted this stock as collateral — got rid of most if not all of that $5,000,000 of common stock which they themselves held as a profit, and also managed to let go of the stock held by the syndicate. History does not record what the western oil operators did with their $5,000,000 of stock. That was a private matter and nobody's business.

Perhaps, then, the public now owns a large amount of this western oil stock which it bought at an average of $60 a share. If it does not, that is not the fault of the bankers. They have done the best they could.

The outcome of this little affair remains, of course, for solution in the future. There is no legitimate reason to suspect that the stock has no value or is of doubtful value. The one dividend which has been declared seems to have been fairly earned, and if the oil trade continues good this dividend may become permanent or may grow larger as time goes on. Possibly the owners of this stock in the future will be glad enough to own it. There seems to be little here akin to the ordinary "get-rich-quick" game with which all the world is now familiar. On the other hand, of course, everybody knows that an oil stock is primarily a gambling security, and this one is no exception.

This story is told here in some detail because it illustrates most of the methods to which the public is exposed in its dealings in speculative stocks in the open market. Almost identical methods were used in the original flotations of United States Steel, Amalgamated Copper, and dozens of other similar stocks, some of which have justified their original prices and some of which have not. It may be suspected that a good part of the skill with which Mr. Samuel Untermyer cross-examined Mr. Lewisohn was based upon the fact that Mr. Untermyer himself was originally counsel for the Amalgamated and was trying to analyze a process which he knew by heart. Those who live within range of the markets know that this sort of manipulation and exploitation goes on continuously, in almost all kinds of active stocks, and under almost every kind of circumstances. We have seen dozens of such campaigns that have succeeded and dozens that have failed.

This fact, which sounds somewhat grim and sardonic as one writes it in plain English, is the underlying fact in a widespread agitation for a cleaner Stock Exchange and a more honest marketplace. Since all the world knows to-day the methods of manipulation and exploitation and the diverse and devious ways by which such master craftsmen as Mr. D. G. Reid, Mr. James R. Keene, and the late H. H. Rogers, and others of their kind coaxed the public into buying their fancy flotations in Steel, Copper, or American Can, the public has come to the conclusion that the speculative market is trying to fool all the people all the time and that it is about time to call a halt.

That is the main hope of the investment market. For that reason more than for any other the little people who have saved up a few hundred or a few thousand dollars and do not want to lose it are turning more and more to the safety and security of legitimate investment bonds and stocks that do not need to be crammed down the throats of the public under high pressure and at a fancy profit. By the time enough of the public has learned its lesson we shall have in this country an act similar to the Companies Act of Great Britain, which makes it necessary for a promoter to let the public know what profits he is making in the promotion ventures in which he seeks public interest.

"WHAT I AM TRYING TO DO"

BY RECLAMATION TO CREATE OPPORTUNITIES FOR MEN TO MAKE HOMES — A COLOSSAL GOVERNMENT WORK OF CONSTRUCTION OF THE HIGHEST DAMS IN THE WORLD AND OF THOUSANDS OF MILES OF CANALS AND DITCHES TO PUT WATER ON THE DESERT

BY

FREDERICK HAYNES NEWELL

(DIRECTOR OF THE UNITED STATES RECLAMATION SERVICE)

TO CREATE opportunities for American citizens is the basic intent of the Reclamation Act. To make habitable millions of acres of worthless desert and to place thereon in homes of their own a million families of progressive American citizens — these are the vital things in the work of the Reclamation Service which I am trying to accomplish.

By the Reclamation Act, approved June 17, 1902, Congress devoted the proceeds from the sales of the public lands in the states and territories in the arid region of the West to the construction, operation, and maintenance of irrigation works to bring to the desert lands the water supply to make them fertile. By storage of the floods in great reservoirs and diversion of the streams in huge canals large areas otherwise totally unproductive and practically uninhabitable are being made to furnish comfortable livelihood for thousands of families.

The law provides that the public lands so irrigated shall be given practically free of cost to the settler under the terms of the homestead law. The homestead settler and the holder of neighboring land in private ownership to be irrigated, however, must repay, without profit or interest, the cost of construction, operation, and maintenance of the works which render these lands productive.

The work has divided itself naturally into two stages: the first, in which we had to create an organization, investigate the projects and construct the works; and second, in which we maintain and operate the finished irrigation systems and collect the payments required by the Act.

The first great step was to create an organization to handle a work of a magnitude and character entirely different from any in which the Government had previously been engaged. This organization had to be created from a nucleus of a few men who were available and who were qualified to lay the foundations for this undertaking, enlarging it under the restrictions of Civil Service laws and regulations. This has been successfully done, after considerable improvements had been made by the Civil Service Commission adapting its rulings to the conditions on the ground and which approach more nearly those of ordinary business than are found in other branches of the Government service. We were doing work from Montana to New Mexico, big construction jobs in the uninhabited places, and we had to have an elastic and efficient organization.

Another important element in securing an effective organization was the handling of our money. When the Reclamation Act was passed, the methods of that branch of the Treasury Department which dealt with us were not well adapted to the needs of our work. The accounts were not settled with the promptness necessary for maintaining the credit of the Service and to secure cash discounts. Payments could not be made with the ease and rapidity needed in the employment of scattered forces of laborers and the fulfilment of contracts. After much patient work the necessary modifications were made in the auditing details of the Treasury, so as to make possible the successful handling of large undertakings.

This work of perfecting the organization and fiscal methods was necessarily carried

on at the same time with the beginning of an extensive construction programme, which so far has cost more than $75,000,000. Eventually, however, the necessary engineering, legal, and clerical forces were gathered into a combination which is securing effective results. President Taft's Commission on Efficiency and Economy has commended the organization as among the best in Government service. After ten years of organization, investigation, and construction, the Reclamation Service now has undertaken and completed or practically completed seventeen projects scattered throughout the West from North Dakota to New Mexico and from Southern California to the state of Washington.

Eight or nine other projects are being vigorously constructed and are in varying stages of progress. In addition to this the Reclamation Service is engaged in the construction of large irrigation projects on three Indian reservations in Montana which are carried on for the Indian Service.

The highest dam in the world has been built on the Shoshone project in Northern Wyoming, rising above the foundation more than 328 feet. A dam to be still higher is under way on the Boise River in Idaho, to be 351 feet high. On the Rio Grande in New Mexico is another dam to be 265 feet high. This will produce possibly the largest artificial lake of its kind in the world, covering almost 65 square miles (41,280 acres) and having a storage capacity of 2,760,000 acre-feet. This is an amount of water sufficient to cover that number of acres one foot in depth. This quantity of water would cover the state of Connecticut more than 10 inches deep. The Service has built the longest irrigation tunnel in the world on the Uncompahgre Project in Colorado, the Gunnison Tunnel, having a length of nearly 6 miles and a discharge capacity of 1,300 cubic feet per second, a good-sized river. Practically every Government in the world that is building public works has sent engineers to see these and such other pieces of construction as the Pathfinder Dam in Wyoming, 215 feet high; Owl Creek Dam, South Dakota, 6,200 feet long; Laguna Dam, Arizona-California, nearly a mile long across the Colorado; Interstate Canal, 100 miles long, Wyoming-Nebraska; Strawberry Tunnel, 4 miles long, piercing the Wasatch Mountains in Utah; the Roosevelt Dam in Arizona, 284 feet high.

TASKS ACCOMPLISHED IN TEN YEARS

In the ten years of its work the Service has built 7,300 miles of canals, enough to reach from New York to San Francisco and back. Several of these canals carry whole rivers.

It has excavated 21 miles of tunnels.

Its excavations of rock and earth amount to the enormous total of 93,000,000 cubic yards.

It has built 626 miles of road; 2,094 miles of telephones; 70 miles of levees.

It has purchased 1,051,000 barrels of cement and has manufactured in its own mill 340,000 barrels more.

As a result of its work, water is available for 1,159,234 acres on 14,200 farms.

The gross value of crops produced on the lands irrigated by the Government projects in 1912 was estimated at $20,000,000. As a result of the work of the Government it is estimated that land values have increased more than $105,800,000.

The construction work, though it has tested the engineering ability of the Service, has not been the most difficult. The engineers have dealt with the forces of Nature and with physical conditions whose effects are at least fairly well understood, but since the inauguration of the second stage of operation and maintenance and repayment, the Service has been brought face to face with the necessity of dealing with the settlers, and this involves conditions far more difficult to foresee and to coöperate with.

In this formative period on the projects, when the home builders are just moving on the land and many new problems arise, it is inevitable that there should be differences of opinion between the settlers and those whose duty it is to administer the projects within the limits of the law. A Government Service has to treat every one alike no matter how different they are or how different their circumstances. In communities such as make up the projects, composed of people from all the

THE SCENE OF THE BATTLES WITH THE DESERT

SHOWING THE SITES OF THE PRINCIPAL IRRIGATION PROJECTS WHICH ARE THE WEAPONS OF THE RECLAMATION SERVICE IN ITS WAR TO REDEEM THE WASTE PLACES TO HUMAN HABITATION THROUGH PROFITABLE AGRICULTURE BY CONSERVING AND DISTRIBUTING, ALTOGETHER, WATER ENOUGH TO IRRIGATE MORE THAN ONE MILLION ACRES OF LAND ON MORE THAN 14,000 FARMS

states, of various nations and religions, and most of them new to the West and its requirements, it would be absurd to expect that the administration of an irrigation system under the rigid requirements of la[illegible] could be carried on without some friction.

Farming under irrigation has its disappointments and disillusionments. Success in the desert is obtained only by hard work. Most of the water users seem to be willing to repay the charges as required by the law and are doing so to the best of

their ability, in many cases being subject to serious hardships in so doing. Only 5 per cent. of the approximately 14,200 families have failed to meet the requirements, while 5 to 7 per cent. have sold or relinquished their land for a consideration. So that about 90 per cent. have remained and are "making good."

These conditions are referred to merely as giving a general idea of the difficulties growing out of the relations of the Government to individuals in a business capacity and to indicate the problem, the solution of which is the most important duty now confronting the officers of the Reclamation Service.

One of the essentials is that there must be infused into the minds of the settlers a clearer consciousness of the limitations of individual effort, a strong desire for coöperation, and a high regard for the self-imposed regulations without which the operation and maintenance of these great public utilities cannot be conducted, for an irrigation work is above all things a coöperative enterprise. Those who live by its water can not have the isolation of some farm districts. They must deal with their neighbors in the management of the dams, ditches, and supply of water.

The water users must develop their own leaders and managers; the investment — millions of dollars — at stake requires a far closer scrutiny of the business of the project than is usually found necessary in other farming enterprises. The conditions under which these irrigators work are bound to produce business farmers, men of a coöperating spirit, an appreciation of business methods, and a grasp of large affairs.

The supervision of the irrigation system is practically a public duty, and the effect of such education upon a large community cannot fail to be apparent in their dealings with other matters of political interest, not only in the politics of the county but those of the states and of the Nation.

In these new communities, composed of the most heterogeneous groups of people, development must necessarily be slow, and the would-be irrigator who succeeds in this pioneer enterprise must possess thrift, energy, strength, and be willing to endure for the first few years more or less privation. The neighborhood or community spirit, which has been the foundation of older settlements, is built up only through years of effort in the common cause.

But there is substantial, steady progress. Thousands of families are being established upon the land in small homes and, at the end of ten years, every family will have a little farm worth from $5,000 to $10,000 which is not only capable of supporting the family but is an assurance of a steady income. Many of these people — in fact, most of them — would probably have drifted about from town to town as the head of the family sought or lost employment and, even though wages may have been good, few would have been so situated that they were compelled to save and make provision for a permanent home.

Many of the men thus permanently located have been mechanics, miners, and others wandering aimlessly about and never able to accumulate enough money to buy a home and probably never with an incentive to do so. Without this opportunity they might have drifted into the ranks of the discontented, neglectful of all social or political duties, and to that extent become a danger rather than a help to the commonwealth.

The transformation which takes place when such a man is given an opportunity to obtain 40 acres of irrigated land is most striking. The sense of proprietorship and the ability to utilize all efforts practically in building up a home and farm soon encourages an interest in local affairs, in the building and improvement of roads, in the maintenance of schools, and gradually in the larger affairs of the state and of the Nation. As someone has aptly said, "Who ever heard of a man shouldering his musket to fight for his boarding house?"

Not only are the vast areas of desert being reclaimed to agricultural use, but thousands of families are finding thereon the opportunity to establish independent and permanent homes. Communities are springing up in all these rainless valleys, which in time will furnish examples of the highest and best forms of social democracy.

THE NEW DEMOCRACY OF BUSINESS

HOW THE FINANCIAL OLIGARCHY HAS BEEN SWEPT OUT OF EXISTENCE IN SEVEN YEARS AND HAS BEEN REPLACED BY NEW MEN WITH CHANGED METHODS AND A DIFFERENT SPIRIT—THE PASSING OF THE AGE OF GREAT TRUSTS AND THE DAWN OF THE DAY OF LITTLE THINGS IN FINANCE AND IN ORGANIZATION—BUILDERS INSTEAD OF EXPLOITERS NOW THE LEADERS—WHO THEY ARE

BY

C. M. KEYS

SEVEN years ago Mr. Sereno S. Pratt, analyzing the control of Big Business in the United States, named seventy-six men who at that time collectively dominated American industry, including in that term all the transportation, finance, trade, and manufacturing of the country. Of these seventy-six men, twenty-eight are now dead, and ten have retired from active business. Thus in seven years the oligarchy of American business has been cut squarely in two.

Among those who have been removed by death have been many of the active leaders in the business of the country. Among them one may name the following: Marshall Field, E. H. Harriman, A. J. Cassatt, H. O. Havemeyer, C. A. Griscom, Cornelius N. Bliss, John F. Dryden, H. H. Rogers, Paul Morton, Samuel Sloane, Russell Sage, Edwin Hawley, John S. Kennedy, John Jacob Astor, Morris K. Jessup, John A. McCall, and D. O. Mills.

Men of that famous list who have since then practically retired from business or at least from leadership in big business are Mr. James J. Hill, Mr. Adrian Iselin, Mr. Henry C. Frick, Mr. R. A. McCurdy, Mr. Levi P. Morton, Mr. C. W. Morse, Mr. George W. Perkins, and Mr. Thomas F. Ryan.

What names may one write in the list of those who are powerful as time erases the names of Harriman, of Cassatt, and of Hawley in the railroad world? What merchant princes have assumed the tasks laid down by Marshall Field and Bliss? Where are the insurance moguls to replace McCall, Dryden, Hyde, and McCurdy, dead or retired? Who holds the money bags dropped by Russell Sage? Where is the second generation in traction finance to compare with that band of experts — good or bad — headed by Yerkes, Ryan, Brady, Widener, Elkins, and Dolan? Who holds the sceptre of Havemeyer, the King of Sugar? Who in the steamship world succeeds Griscom and Morse? What names of steadfast pioneers of capital may we write over the erasures made in the roll of power as D. O. Mills, John S. Kennedy, Samuel Sloane and Samuel Thorne have dropped by the wayside? What predatory captain of industrial finance assumes the rôle of H. H. Rogers?

The questions almost answer themselves. There is no Cassatt on the Pennsylvania Railroad; there is no new Harriman in the United States; there is not in the industrial world, and there probably never will be in our generation, a new Havemeyer, or a new Rogers. To-day the money-lending trade is gathered into syndicates and played across the counters of the great trust companies. The whole insurance dynasty has fallen and the insurance business has been put back where it belongs and effectually abolished as a power in control of industry, transportation, and finance. In merchandising no man is supreme — not even Mr. John Claflin, probably to-day the most powerful merchant in the United States. In traction finance alone a new school of men has arisen who are carrying forward on an entirely different plan the attempt to dominate, so far as the scattered and individual business can be dominated, the traction, electric light, and power business

of the country. Of them and of their methods much of interest can be said.

If there have been sweeping and wonderful changes in the personnel of what Mr. Pratt so happily called the Senate of Business, the changes in the principles and practices upon which dominant power in American business is founded are even more sweeping. For example:

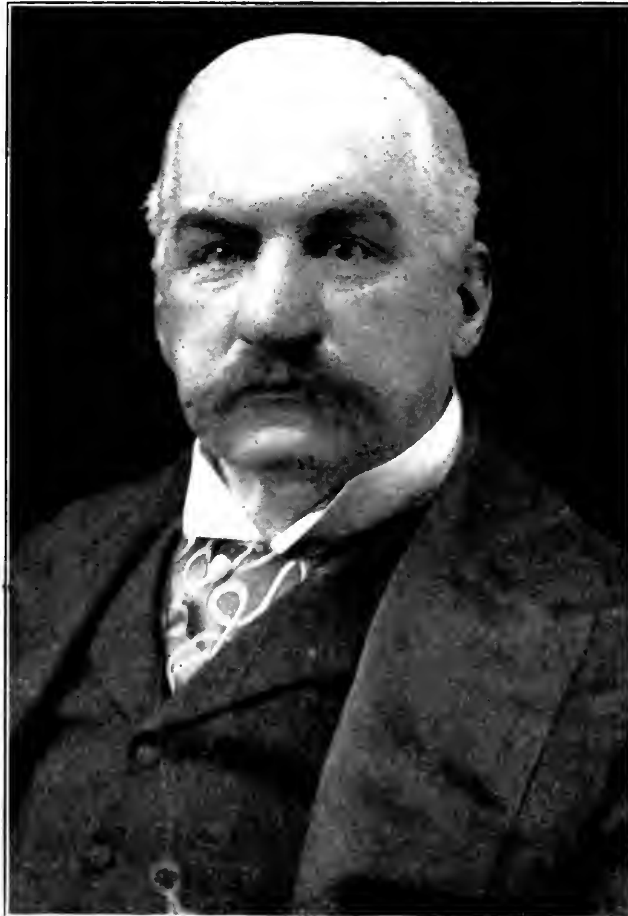
Seven years ago, as now, the name of Mr. J. P. Morgan led the list of the American oligarchy. At that time, however, the House of Morgan was generally

THOMAS W. LAMONT

AN EXPERT IN TRUST COMPANY ADMINISTRATION

CHARLES STEELE

THE LEGAL BRAIN OF THE MORGAN FIRM



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J. P. MORGAN & CO,

THE HEART OF THE "MONEY TRUST," THE ONE GREAT AMERICAN INDUSTRY IN WHICH CENTRALIZATION IS THE DOMINANT NOTE. THESE ARE FIVE OF THE TEN PARTNERS OF THE HOUSE OF MORGAN WHO ARE DIRECTORS IN 228 AMERICAN CORPORATIONS REPRESENTING, ACCORDING TO GOVERNMENT FIGURES, ABOUT $40,000,000,000

H. P. DAVISON

WHOSE COOLNESS IN THE PANIC OF 1907 WON HIM HIS PARTNERSHIP

J. P. MORGAN, JR.

THE HEIR APPARENT TO THE FINANCIAL AUTOCRACY OF THE HOUSE OF MORGAN

described as a magnificent promotion institution. The fame of the flotation of almost all the greatest Trusts in the country lingered around it. The finest fruits of its power were the United States Steel Corporation, the International Harvester Company, the North American Company, the International Mercantile Marine, and a dozen other promotions and re-organizations, like those of the Southern Railway, the Northern Pacific, and the Erie, which would have been almost impossible in the hands of any other house. The strong and active partners of

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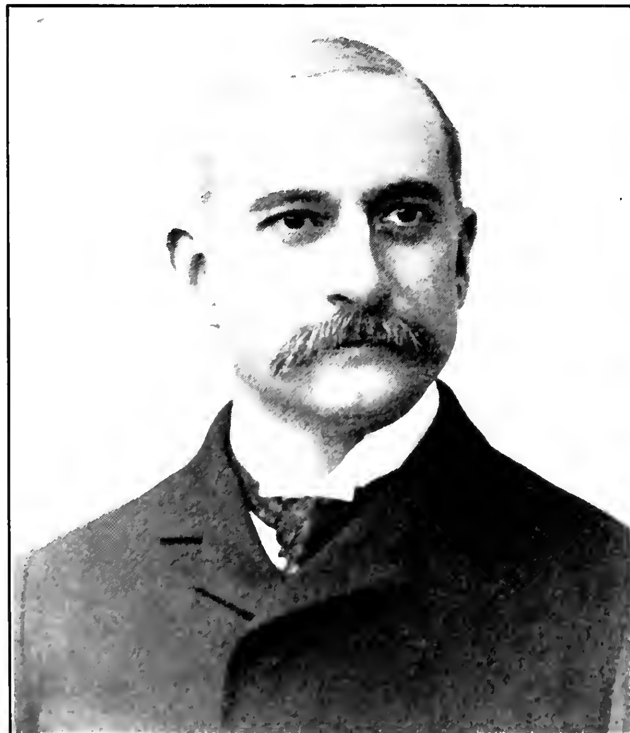
CHAIRMAN OF THE BOARD OF DIRECTORS

FRANCIS L. HINE
PRESIDENT

THE HEADS OF THE FIRST NATIONAL BANK OF NEW YORK, A TYPICAL FINANCIAL BANK WHICH WORKS CLOSELY WITH THE MORGAN INTERESTS IN THEIR GREAT MONEY TRANSACTIONS

the firm were Mr. Morgan himself and perhaps Mr. George W. Perkins, a skilful and agile promoter of the better type.

To-day it is a different story. The panic of 1907 probably put a stop for many years to that particular kind of banking activity. At the same time it brought home to the greatest of our financial leaders the absolute necessity of assuming a dictatorship in the financial



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JAMES STILLMAN
CHAIRMAN OF THE BOARD OF DIRECTORS

FRANK A. VANDERLIP
PRESIDENT

THE HEADS OF THE NATIONAL CITY BANK OF NEW YORK, THE BIGGEST BANK IN THE UNITED STATES, PARTLY FINANCIAL AND PARTLY COMMERCIAL; USUALLY CONSIDERED A STANDARD OIL ALLY

Photographed by Matzene, Chicago

JAMES B. FORGAN

FIRST NATIONAL BANK

Photographed by Matzene, Chicago

GEORGE M. REYNOLDS

CONTINENTAL-COMMERCIAL

THE PRESIDENTS OF THE TWO MOST POWERFUL AND ABLY MANAGED COMMERCIAL BANKS OF THE WEST

Photographed by Matzene, Chicago

J. J. MITCHELL

OF THE ILLINOIS TRUST AND SAVINGS CO., ONE OF THE MOST SKILFUL FINANCIAL BANKS IN CHICAGO

banking business outside of pure promotion which had never been exercised in this country by any firm or any institution — a dictatorship in fact as nearly akin as Mr. Morgan could make it to the tremendous power exercised in other lands by great national central banks of discount.

Therefore, a change came over the house of Morgan. New partners came in, drawn from the banking world. Mr.

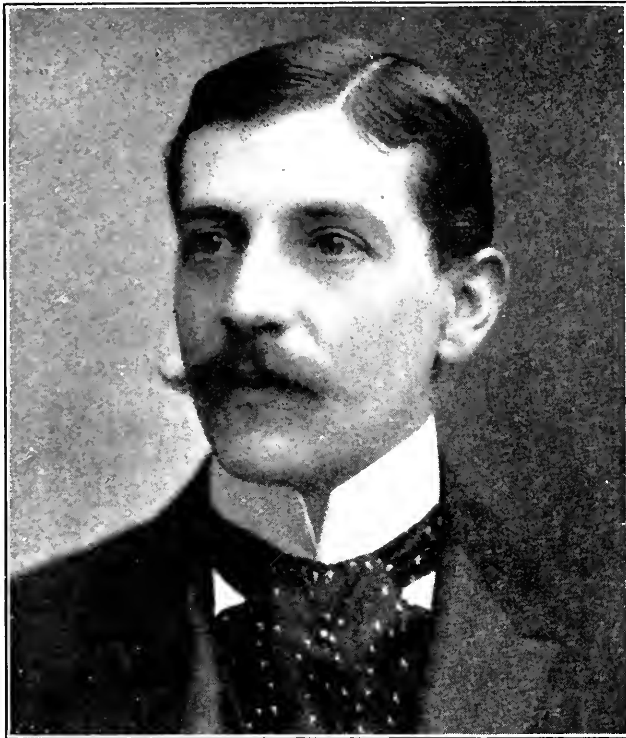
ALBERT H. WIGGIN

PRESIDENT OF THE CHASE NATIONAL BANK

CHARLES H. SABIN

VICE-PRESIDENT OF THE GUARANTY TRUST COMPANY

TWO OF THE YOUNGER SCHOOL OF NEW YORK BANK OFFICERS WHO WORK IN CLOSE SYMPATHY WITH THE PLANS AND POLICIES OF J. P. MORGAN & COMPANY



JAMES SPEYER

WHO INHERITED A BIG PRIVATE BANKING BUSINESS AND HAS KEPT IT GOING

William H. Porter, president of the Chemical National Bank, had never been associated in the public mind with any kind of banking except the pure commercial brand. He became one of Mr. Morgan's new partners. Mr. Thomas W. Lamont, who had been president of the Bankers' Trust Company of New York and vice-president of the First National Bank, was known as a skilful and adroit financial banker, as distinguished from commercial bankers like Mr. Porter of the Chemical. He, too, was drawn into the Morgan machine. In the midst of the panic a junior officer of the First National Bank, Mr. H. P. Davison, had demonstrated to the satisfaction of the financial world that he could keep his head better in a panic and stand up in the midst of a storm better than almost any other man playing the game of finance. He joined the Morgan army, and his translation into the upper realms of finance was one of the news wonders of the day.

JACOB H. SCHIFF

HEAD OF KUHN, LOEB & CO., WHOSE GREATEST WORK WAS AS BANKERS FOR E. H. HARRIMAN

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AUGUST BELMONT

THE BANKER WHO FINANCED THE BUILDING OF THE NEW YORK SUBWAY

Shortly after that Mr. Perkins, the function for which he had become noted having become a secondary function with the house of Morgan, withdrew from the firm, and he disappeared, pretty much, from the scene so far as finance and business are concerned. Since that time the Morgan firm has been more and more a banker and less and less a promoter. Mr. Morgan is no longer the Maker of Trusts. Instead, he has bought in and piled up

around him a group of powerful banks and he exercises now, what he had never exercised prior to the panic of 1907, namely: an almost dominant voice in the big financing of great established enterprises and in the whole world of commercial and financial banking.

Mr. Morgan, then, stands to-day, as he stood seven years ago, the most powerful individual influence in American business, but his power is exercised not so much in a direct domination of the administrative policies and the physical properties of railroads and industrials as through the

Photographed by Matzene, Chicago

H. M. BYLLESBY

A CHICAGO ENGINEER WHO HAS GAINED A GREAT REPUTATION IN BUILDING AND MANAGING ELECTRIC PROPERTIES. A TYPE OF THE BETTER ERA IN THE PUBLIC UTILITY FIELD SINCE THE REIGN OF RYAN, ELKINS, AND DOLAN

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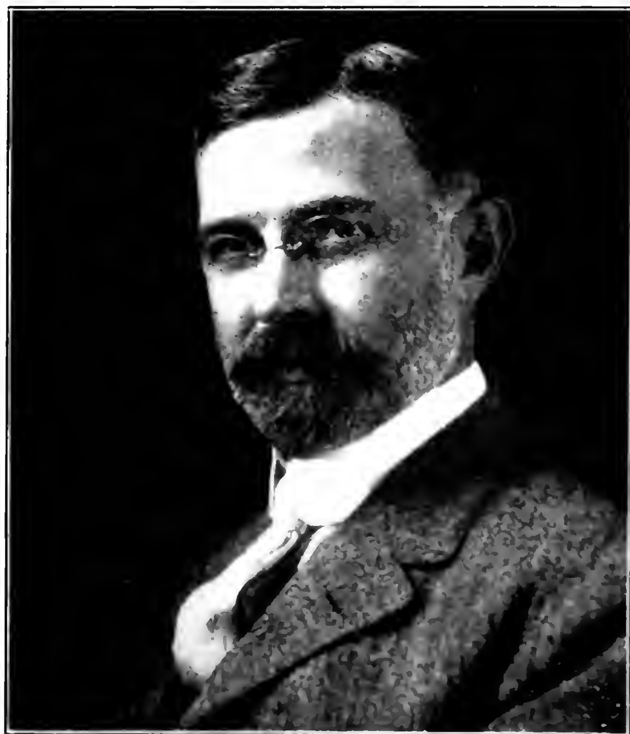
WM. G. McADOO

THE LAWYER WHO BUILT AND MANAGES THE HUDSON RIVER TUBES, A GOOD PUBLIC UTILITY

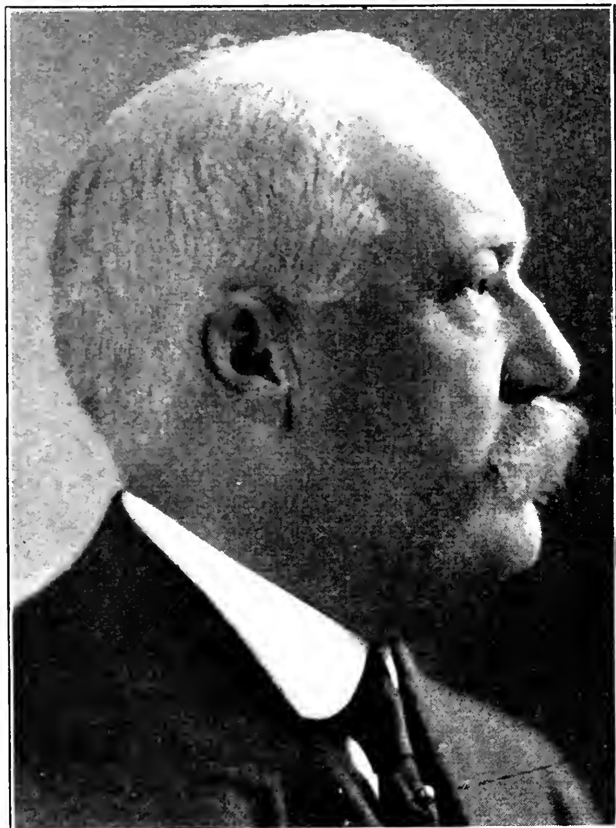
exercise of the much more subtle but perhaps not less complete control of the financial destinies of these same corporations by means of a powerful control over the sources of working capital for all the great business of the Nation. It may be added that in the course of the creation of this new empire of business he has reconciled two individuals as strong as Mr. James Stillman of the National City Bank and Mr. George F. Baker of the First National Bank who, until the panic of 1907, followed their separate paths to wealth and fame without too much regard for the welfare of each other or even of Mr. Morgan himself.

If this single autocratic power has grown greater by its transformation during the last seven years — and few doubt that



H. L. DOHERTY

A DENVER MAN WHO HAS HAD A SPECTACULAR CAREER AS A PROMOTER OF PUBLIC UTILITIES



E. C. CONVERSE

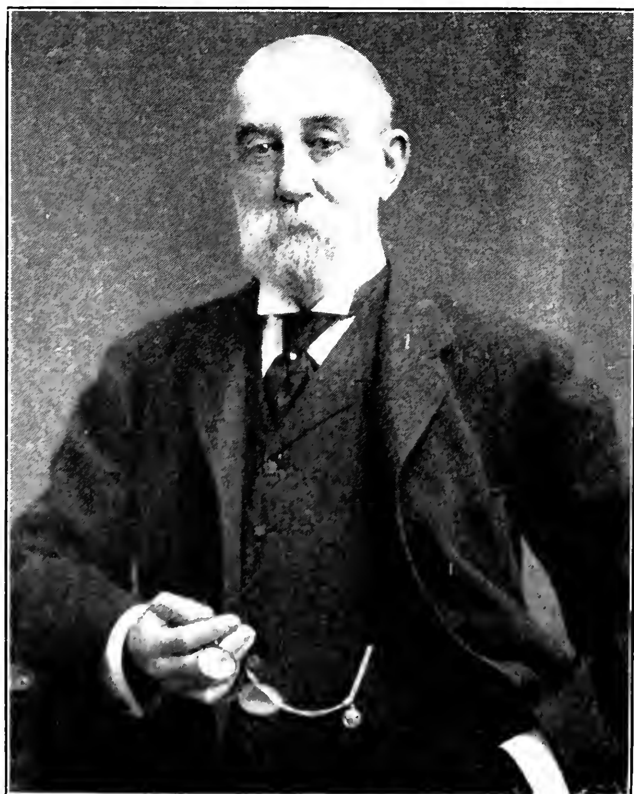
A CAPITALIST ACTIVE IN STEEL AFFAIRS AND TRUST COMPANY FINANCE

it has — it is practically the only group of individuals that to-day exercises a greater power than it exercised seven years ago.

HENRY FORD

A PARTICULARLY SUCCESSFUL MANUFACTURER OF AUTOMOBILES, A LEADER IN AN INDUSTRY WHICH HAS NEVER BEEN DOMINATED BY A "TRUST"

Turn for a contrast to the business of transportation. When Mr. Pratt wrote, the whole world was full of Harriman. He had not yet quite reached his zenith, for the Union Pacific and the Southern Pacific had not yet startled the world by the declaration of huge dividends and Mr. Harriman had not yet announced that the Union Pacific had used its fearful credit to buy heavily into the stock of the Illinois Central, the New York Central, the Baltimore & Ohio, the



E. B. THOMAS

THE PRESIDENT OF THE LEHIGH VALLEY RAILROAD. A RAILROAD EXECUTIVE OF THE OLD SCHOOL THAT HAS ALMOST VANISHED

DR. EDWARD A. RUMELY

AN IMPLEMENT MANUFACTURER; A TYPE OF THE INDEPENDENTS WHO NOW BORROW MONEY THAT FORMERLY WENT ALMOST EXCLUSIVELY TO "TRUSTS"

D. G. REID

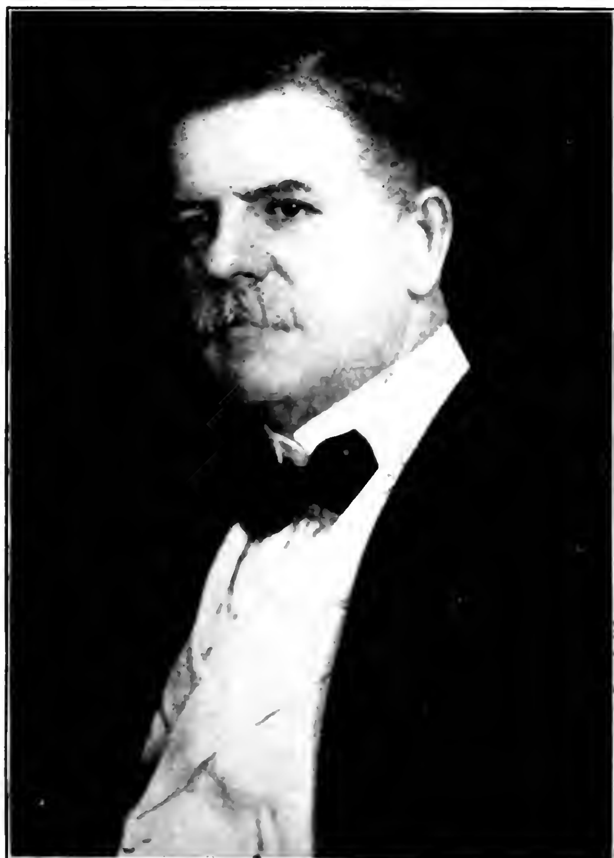
CAPITALIST, A POWER IN MANY CORPORATIONS, WHO NOW AND AGAIN REVERTS TO OLD FASHIONED STOCK MARKET OPERATIONS ON A GIGANTIC SCALE

Northwestern, and other railroads. The Harriman dynasty at that time, in fact, was being rounded out into the shape in which it finally appeared, in 1907, as practically the dominating power both east and west of the Mississippi.

Where now is the kingdom of Harriman? All men know that the authority of the one man who by his genius and courage created this greatest of all railroad sys-

W. A. CLARK

EX-SENATOR FROM MONTANA, A MINE OWNER AND RAILROAD BUILDER WHOSE PIONEERING IN THE COPPER INDUSTRY MADE HIM FABULOUSLY RICH



CYRUS H. McCORMICK

WHO INHERITED A GREAT MANUFACTURING BUSINESS AND MADE IT THE CORE OF THE GREATER INTERNATIONAL HARVESTER COMPANY

W. K. VANDERBILT

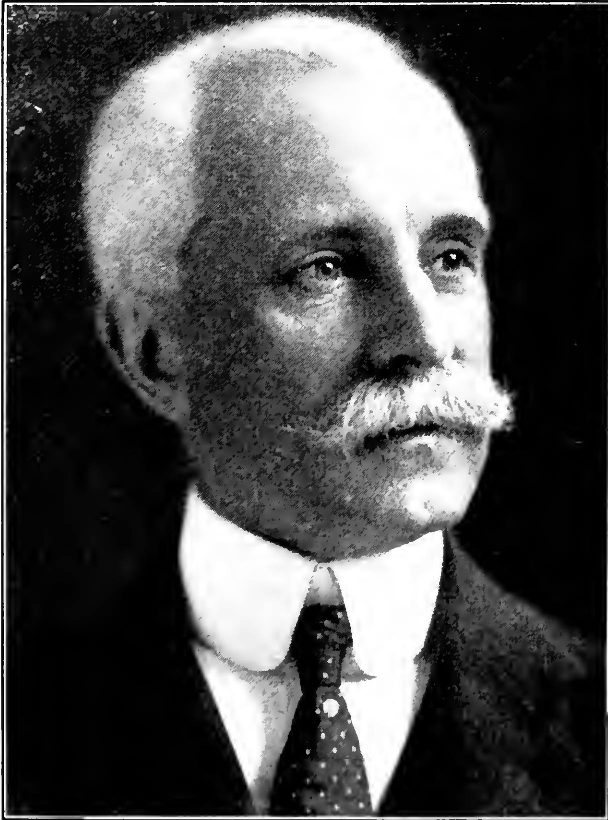
WHO INHERITED THE CONTROL OF THE NEW YORK CENTRAL SYSTEM, A TYPE OF THE SECOND GENERATION IN RAILROAD FINANCE

tems is now split up amongst a dozen men and delegated to officers in the four corners of the country, so that to-day no man may boast that he controls the policy or dictates the destiny of the Union Pacific itself, less yet the dozen other great corporations that hung on the word of Harriman. Without the intervention of bankruptcy I do not think that there has ever been a more complete dispersal of autocratic power than has been witnessed in the Union Pacific. It is enough to say that hardly half a dozen men in the United States, outside those immediately interested, could name more than half the men who to-day are exercising on these lines the authority once held in the hand of Harriman. Here an autocracy has become almost a democracy.

CLARENCE H. MACKAY

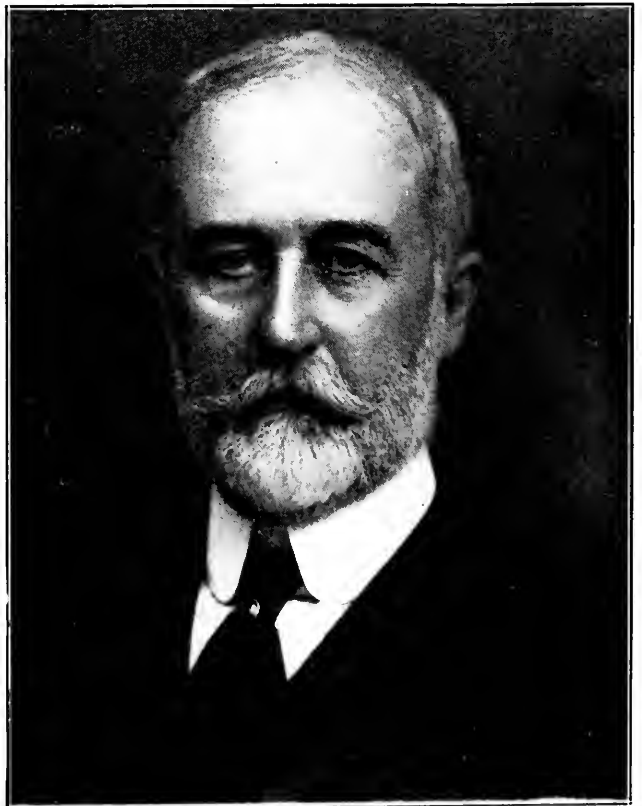
WHO HAS MANAGED WELL A GREAT ESTATE IN TELEGRAPH AND CABLE PROPERTIES

In the industrial world nothing, perhaps, is so striking as this railroad incident, but there have been plenty of sweeping changes; and, whether by accident or by the operation of some economic law, they all seem to point to exactly the same conclusion. For example: Seven years ago the Standard Oil group was practically intact. The unique genius of Mr. John D. Rockefeller, the solid, substantial wisdom of his brother William, the agility and daring of Rogers, the acumen of Flagler, and the marvelous merchandising



E. T. STOTESBURY

WHO HAS WORKED FOR FORTY-SIX YEARS IN DREXEL & CO., AND WHO NOW IS THE DOMINANT FIGURE IN THAT PHILADELPHIA REPRESENTATIVE OF THE HOUSE OF MORGAN



CHARLES A. PEABODY

THAT HIS CONNECTION WITH FINANCE IS ALMOST ALTOGETHER AS A CAPITALIST AND NOT AS PRESIDENT OF THE MUTUAL LIFE SHOWS THE EMANCIPATION OF INSURANCE FROM WALL STREET CONTROL

ability of Mr. Bedford, still ruled the oil business not only of the United States but to a more or less striking extent of the whole world. It is a different story now. Rogers is dead, Mr. William Rockefeller has been partially an invalid for more than a year and is not active in business. Mr. John D. Rockefeller is only an advisor now. One finds it hard to say whether Mr. Bedford belongs to the Standard Oil or to Corn Products in these latter days. The old phalanx is broken.

It came, of course, along with the Government suit to dissolve the Standard Oil Company of New Jersey. That suit split up the splendid combination wrought by the genius of the Standard Oil party into

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J. D. ARCHBOLD

OF THE STANDARD OIL COMPANY, A DISSOLVED TRUST WHOSE POWER IN POLITICS AND MONOPOLY IN BUSINESS HAVE BEEN SHATTERED

H. C. FRICK

ONE OF THE STEEL KINGS WHO IS ACTIVE AS A CAPITALIST MAKING HIS MONEY WORK FOR HIM IN RAILROADS AND INDUSTRY

many scattered companies and ordered them to compete. They are competing more or less. At any rate they have lost the power which made the Standard Oil Company in the past a wonder and a terror throughout the world. Dozens of other companies, unthought of and impossible in the past, have sprung into being. Just lately one has heard that even a foreign monopoly has invaded the field of California and will refine in competition in what was formerly a veritable Standard Oil stronghold.

Not quite the same is the story of Tobacco. Here the status of the old Tobacco Crowd is to-day too uncertain to be defined. Nobody knows how much Mr.

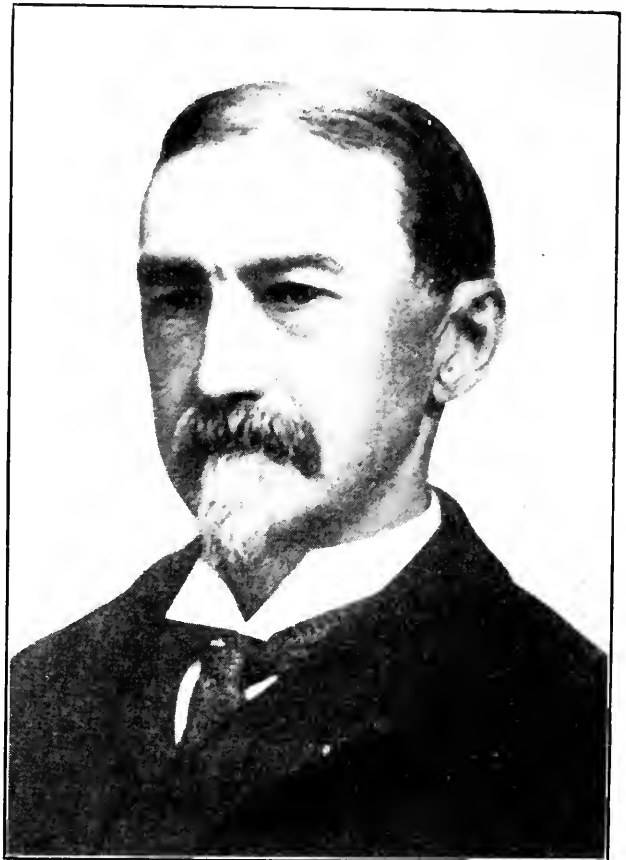
Photographed by Matzene, Chicago

J. OGDEN ARMOUR

WHO INHERITED CONTROL OF THE LARGEST AMERICAN PACKING COMPANY, IN THE "BEEF TRUST"

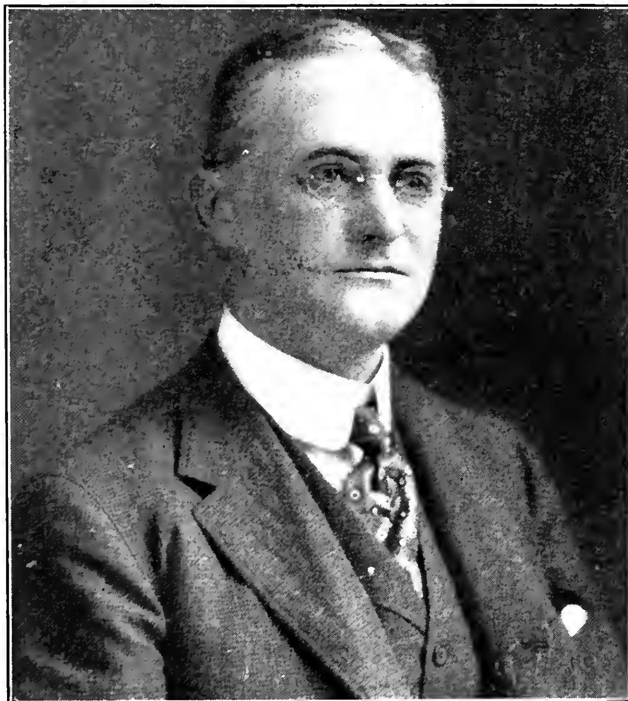
James B. Duke is still the lord of tobacco. The Government, it is true, has smashed the so-called Trust into a lot of scattered companies, but the status of the trade is too undefined at this moment to hazard even a guess as to whether or not the Tobacco Ring has become a thing of the past. Only, it seems certain that Mr. Thomas Fortune Ryan, so long associated with the luck of the Tobacco Trust, really has retired from business, so far as a fighting man like him can ever be said to have retired.

Let us glance at sugar, as we review the making of the new order of things in



E. C. SIMMONS

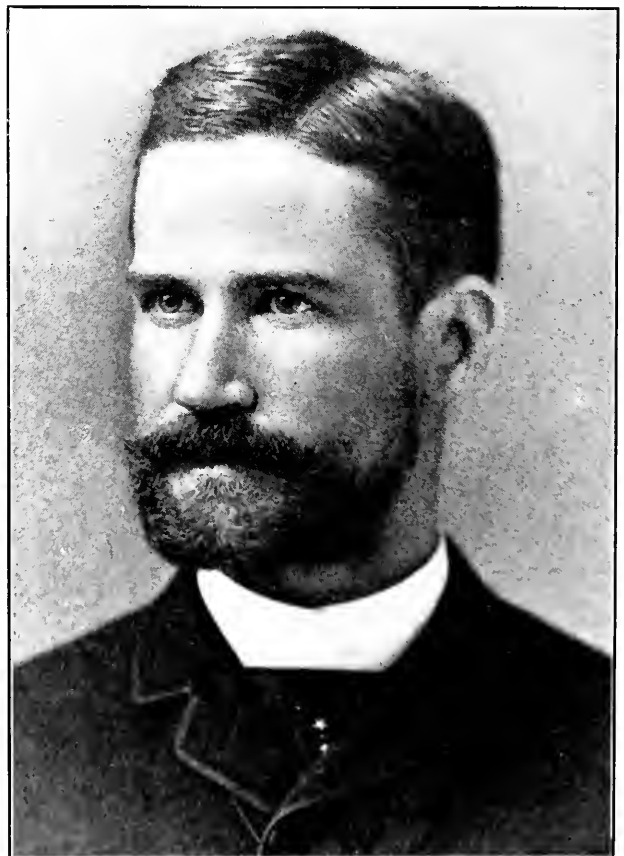
OF THE SIMMONS HARDWARE CO., A TYPE OF THE CREATOR OF NATIONAL INDUSTRIES THROUGH TRADE AND NOT THROUGH FINANCE



GEORGE EASTMAN

THE KODAK MANUFACTURER, A MASTER OF ORGANIZATION AND SELLING METHODS

American business. The American Sugar Refining Company, by that and other names, was one of the first and longest-lived of the great American Trusts. It had the distinction of being tried for its life long before the Steel Trust was born, and condemned to death; but it escaped under a commuted sentence and throve wonderfully in its new form under the hands of H. O. Havemeyer. Not only did it dominate the refining of cane sugar, but it also reached out its hands to strangle an infant industry: the growing of sugar beets and the manufacture of sugar from them. It came in time practically to dominate the manufacture of all sugar in

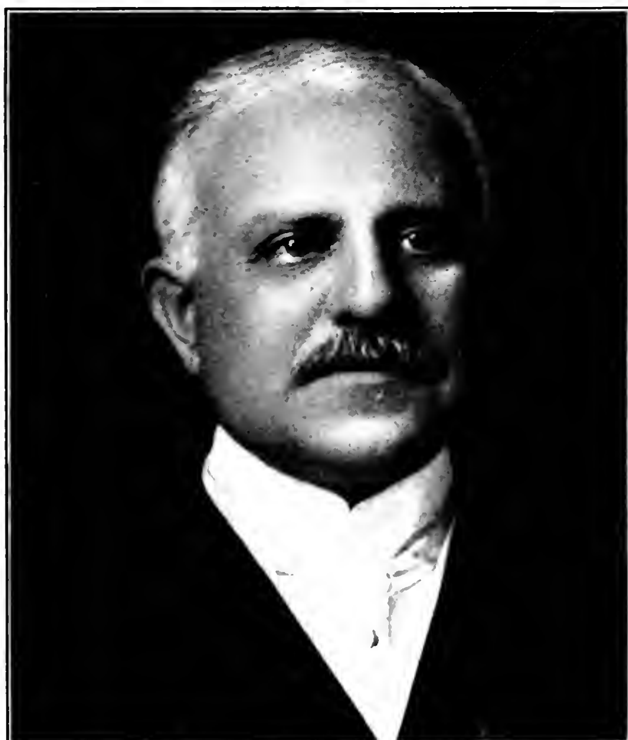


JOHN CLAFLIN

ONE OF THE GREATEST MERCHANTS IN THE COUNTRY, THOUGH HE HAS NOT AUTOCRATIC POWER IN THE DRY GOODS TRADE

this country although, of course, there were some independents.

A hard-headed, hard-fisted fighter was Havemeyer. He was an industrialist of that old school whose first principle was to win at any price. He dictated the policies of his corporation under an autocratic rule that has seldom been matched in a corporation involving capital in eight figures. In the later years of his life a few of his stockholders rebelled and wanted to know something about the corporation, but right to the end he faced them down and challenged the right of any man to question his administrative authority in



DANIEL GUGGENHEIM

HEAD OF THE SMELTER TRUST, A FINANCIAL INDUSTRIAL CAPITALIST OF THE OLD SCHOOL

the affairs of that corporation. He was an absolute dictator and not the less so because he secured his power by the proxies of thousands of stockholders scattered all over the world.

Seven years ago almost any school boy in New York, Boston, or Philadelphia could have told you who owned the Sugar Trust. To-day it has no owner; it is almost a democracy. Its affairs have been ripped wide open by the Government investigators; its officers in some instances have been indicted and tried for malfeasance in office; its stockholders have risen in a body and taken into their own

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E. H. GARY

CHAIRMAN OF THE BOARD OF DIRECTORS OF THE STEEL TRUST, A LAWYER, DIPLOMAT, AND RECONCILER OF DIVERGENT INTERESTS

C. M. SCHWAB

PRESIDENT OF THE BETHLEHEM STEEL CORPORATION, A GENIUS IN STEEL MAKING WHO RUNS AN INDEPENDENT COMPANY WITH SUCCESS

A. J. EARLING

OF THE ST. PAUL, WHO HAS MADE A LOCAL RAILROAD INTO A TRANSCONTINENTAL

B. F. YOAKUM

OF THE 'FRISCO SYSTEM, A BUILDER OF THE SOUTHWEST, WHO DEVELOPS HIS TERRITORY

hands the choice, not of a king to rule them, but of an able, conscientious, and obedient servant to administer their corporation for them. So ends another autocracy in business.

If, however, there have been great changes of this sort in the railroad and industrial world, the most significant change of all was brought about almost immediately after the publication of Mr. Pratt's article by the sweeping away of the old insurance dynasty represented, perhaps one might say, by Messrs. John A. McCall of the New York Life, J. W. Alexander and John Hazen Hyde of the Equitable, R. A. McCurdy of the Mutual Life, John R. Hegeman of the Metropolitan Life, and John F. Dryden of the Prudential, all companies having their headquarters in or near New York.

In those past times it was the habit of big finance to call upon the major insurance companies to help finance the undertakings of big business. When, for instance, it seemed necessary in the carrying out of the ambition of Messrs. Hill and Morgan

Photographed by Matzene, Chicago

JULIUS KRUTTSCHNITT

OF THE SOUTHERN PACIFIC, A SKILFUL RAILROAD MAN EXERCISING ONE OF MR. HARRIMAN'S FUNCTIONS

Photograph from M. E. Berner, N. Y.

JUDGE ROBERT S. LOVETT

OF THE UNION PACIFIC, WHO SUCCEEDED TO SOME OF THE EXECUTIVE LABORS OF THE LATE E. H. HARRIMAN

to create a tremendous bond issue and buy in control of the Chicago, Burlington & Quincy, two or three of the biggest life insurance companies were called upon in the ordinary course of events to subscribe for great blocks of the bonds so created. Thus, in the reports for 1907 one is not surprised to find the New York Life the holder of $12,500,000 of these C. B. & Q. joint bonds, the Equitable holding $3,000,000, and the Mutual Life holding $6,000,000 — a total of $21,500,000 out of about $200,000,000 issued. This case is cited, of course, merely as an illustration, and with no intention to criticise either the value of the bonds in question or the integrity of the people who made the purchases and the sales. It was a habit, in fact, into which the great insurance companies of New York had fallen, this purchasing of huge blocks of underwriting put out in connection with the financial plans of the railroad kings.

JUDGE MOORE OF THE ROCK ISLAND

ONE OF THE OLD TYPE OF CAPITALISTIC RAILROAD DICTATORS WHO DOES NOT MEDDLE WITH HIS OPERATING STAFF

A GREAT NORTHERN TRINITY

J. J. HILL, THE GRAND OLD MAN OF THE NORTHWEST; LOUIS HILL, HIS SON (IN THE BACKGROUND); AND CARL GRAY (WITH THE CIGAR) THE NEW PRESIDENT WHO OPERATES THE GREAT NORTHERN FOR MR. HILL

W. C. BROWN

PRESIDENT OF THE N. Y. C., WHO RUNS THE SYSTEM FOR THE VANDERBILTS

WILLARD OF THE B. & O.

AN ABLE BUSINESS STATESMAN AND A SKILFUL RAILROAD EXECUTIVE

REA OF THE PENNSYLVANIA

A FINE PRODUCT OF THE PENNSYLVANIA'S MILITARY SYSTEM OF RAILROAD ORGANIZATION

UNDERWOOD OF THE ERIE

A TYPE OF THE HARD-HITTING GRADUATE FROM THE RANKS

That practice and the things that grew out of it were utterly damned by the time the Hughes Committee got through with the Insurance Investigation; and the Armstrong Law enacted this condemnation into statute form. The power of the insurance companies as financial agents for big business has been exercised since that time only with the nicest discrimination and with regard for the fact that a good many people are watching what is going on. To be sure, not much has been done to undo the transactions of the past; but it would be a rash insurance president who to-day would buy with the funds of his company $12,000,000 of any new bonds

BUSH OF THE MO. P.

A GOOD RAILROAD MAN WITH ONE OF THE HARD RAILROAD TASKS OF THE ERA

ELLIOTT OF THE N. P.

A MAN WHO KEEPS PEACE AMONG MANY JARRING INTERESTS

HIRED MEN OF THE

THESE MEN ARE TYPICAL OF THE MODERN SCHOOL OF RAILROAD PRESIDENTS. HE IS THE HEAD. THEY HOLD THEIR POSITIONS SIMPLY

TRUMBULL OF THE C. & O.

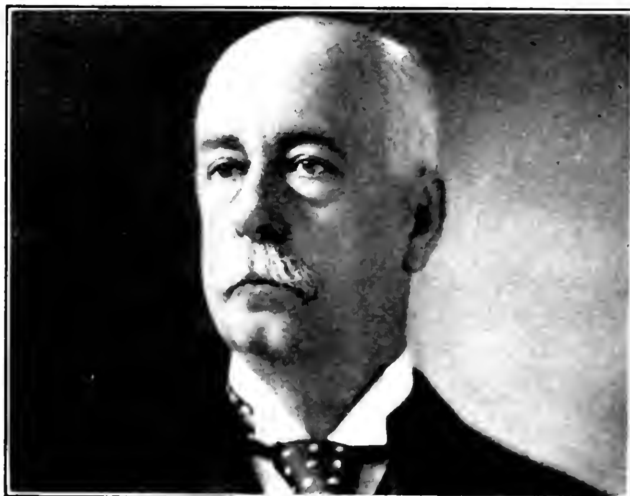
ONE OF THE CLOSEST STUDENTS OF THE RIGHTS OF THE PUBLIC

Photographed by Matzene, Chicago

HUGHITT OF THE N. W.

ORIGINALLY A VANDERBILT REPRESENTATIVE, NOW THE REAL HEAD OF THE NORTHWESTERN

that are being underwritten in Wall Street. There are to-day no successors of Messrs. McCurdy, Hyde, Alexander, and McCall. Instead, the Equitable is presided over by Judge William A. Day, whose name is seldom heard in the circles of high finance and who was chosen by the trustees because he was a man who had gained the confidence of both policy holders and public by a lifetime of hard work, and not because he was likely to be a ready ally of the financial powers. Pretty much the same remark would apply to Mr. Darwin P. Kingsley of the New York Life. Mr. Charles A. Peabody of the Mutual Life is a financial man and a financial agent,



MELLEN OF THE NEW HAVEN

WHOSE ADMINISTRATION HAS BECOME A PUBLIC ISSUE IN NEW ENGLAND

Photographed by Matzene, Chicago

RIPLEY OF THE SANTE FÉ

THE STRONG MAN OF THE SANTE FÉ, FOR SEVENTEEN YEARS ITS PRESIDENT

FINLEY OF THE SOUTHERN

WHO HAS BROUGHT A FAIR DEGREE OF ORDER OUT OF CHAOS ON AN UNWIELDY SYSTEM

RAILROAD WORLD

NONE OF THEM OWNS OR HAS ATTEMPTED TO OWN THE SYSTEM OF WHICH
BECAUSE OF OPERATING AND EXECUTIVE SKILL

THEODORE N. VAIL OF THE TELEPHONE COMPANY
A SELF-MADE MAN WHO MAKES THE POLICIES OF A GREAT PUBLIC UTILITY

but the Mutual is probably no closer to the councils of financial power than are the other two of the famous Big Three.

If one were to-day writing an article similar to Mr. Pratt's, he would probably omit altogether from the list the names of the insurance people as such. Mr. Peabody would probably be named; but it would be rather as a trustee of the Harriman estate and as a powerful financier on his own account than as president of the Mutual Life. The insurance companies, in fact, with one or two exceptions in the fire insurance field, are probably out of the active financial business. They are still, of course, tremendous investors in tried and tested securities; but it is significant that within the last few months two of the largest have begun to buy farm mortgages in large quantities. The insurance companies, in fact, have gone back to first principles and deserted the realm of professional and technical finance.

FREDERICK WEYERHAEUSER
THE LUMBER KING, THE MOST POWERFUL OWNER OF THIS IMPORTANT NATURAL RESOURCE

In another field, very large in the aggregate, there has been in the last few years a striking change, though whether in the direction of democracy or not one finds it hard to say. In the old days the right thing to do with a street railroad or any other public utility that was big enough to stand it was to buy it in, sell it to a new company about twice as big as it was, and then sell this new company to

another one about twice as big again. By this process it was not only probable but almost certain that the promoter would be able to make two or three dollars grow where only one had grown before. It was this beautiful process that made unholy spectacles of the street railway systems of Chicago, New York, Philadelphia, and half a dozen lesser cities.

This particular form of money making has become unpopular. Nobody has been put in jail; but a good many otherwise estimable gentlemen have retired from business as a result of what happened when the bubbles got too big. Nowadays, the process is entirely different, and the gentlemen who are putting it into execution are also different. The process, by the way, is not altogether new, for it began more than ten years ago and has been carried on successfully by its earliest practitioners.

The thing to do nowadays in public utilities is to make a holding company along the lines of the old North American Company, which was promoted by the Morgan firm many years ago. It went out into Detroit, Milwaukee, St. Louis, and other substantial cities and bought up the control of important public utilities in those cities. They are mostly good companies and the result has not been bad either for the cities interested or for the general investment public.

The head of the oldest and biggest of the modern holding companies is Mr. "Jim" Campbell of St. Louis, a hard-headed Irishman with a Scotch name. He makes you think of Mr. James J. Hill a little. He is shrewd, quick, and clever; conservative, yet daring to the limit; a backer of dozens of ventures more or less speculative, but a greater conservationist of money in hand; banker, broker, promoter, and capitalist all in one — a cheerful, American sort of a man, in whose hands money grows and performs some useful functions. Years ago, he "tied-up" with Mr. Yoakum in the St. Louis & San Francisco, and he has stood with the Southwestern man ever since, without hitching, in panic and fair weather. He is different from most of the public utility men, in that he is capitalist and trader rather than engineer.

Of late years, with the demand for better facilities of this sort, there has been an equally powerful call for more and more money to develop these industries. To a certain extent the demand was met by selling the bonds and even the stocks of the separate relatively small companies in the different cities. Pretty soon, however, the facilities of such towns as San Francisco and Pittsburg, were gathered in more or less freely by holding companies and the financing began to be done by means of big blanket issues of bonds and stocks.

To-day, if a layman's opinion is worth anything, the culmination of this process has been almost reached. We have half a dozen or more very large holding companies that own and operate electric light, gas, power, street railway, and water plants in cities, towns, one might almost say villages, scattered from sea to sea. The men who head these combinations are mostly skilled operators of such plants and companies rather than professional financiers. Mr. Samuel Insull, of Chicago; Mr. Harrison Williams, of New York; Stone & Webster, of Boston; H. M. Byllesby & Co., of Chicago, are men and concerns that are better known perhaps in the world of applied electricity than they are in the practice of finance.

Of this group, Mr. Harrison Williams is probably the most picturesque and, perhaps, typical. He is a promoter, primarily, and a financier, secondarily; one of those winning gentlemen who can conjure up money in large amounts to carry out whatever plans may interest him. He came from the industrial field originally, gained the confidence and friendship of the General Electric group, the National City Bank group, two or three big retail bond houses, a lot of little dealers in stocks and bonds — and the rest is easy after that. He has made some big holding concerns, gathered dozens of little electric, gas, power, and traction companies together, financed them fairly well, diluted them with water judiciously, floated them successfully, and operated them, after all, with credit to himself and profits not only to himself but also to those who believe in him. He is young and strong

enough to go a long way, according to his well wishers, if his foot does not slip.

Mr. Insull, of Chicago, is a little different again. As president of the Commonwealth Edison Company, he gained both wealth and fame as a careful, wise, and honest executor. From that, he gained the backing of principal interests in the whole Middle West. So armed, he has gone forward in a sweeping campaign to capture and control dozens of strong or promising public utilities in Indiana, Illinois, California, and other parts of the West. The most surprising of his ventures was the purchase of the biggest concern in California, the powerful Pacific Gas & Electric Corporation.

He is relatively a new man in "Big Business." He is supposed to be a financier and capitalist of the steady and constructive type, relying more upon successful operation than upon financing for his profits; a builder rather than a "milker" or exploiter of industry. He seems to fit in with the new order of things in industry.

This system is undoubtedly better and cleaner than the old system. There is not in it so much exploitation; there is more in it of real service to the country. In some cases there have been manifest signs of wholesale watering and of barefaced manipulation; and it would not be at all surprising if within the next little while some incident occurred of an unfavorable nature in the case of some of these concerns, particularly those that have been handled by financial houses rather than those that have been put together by practical public utility men.

Here one may mark the passing of a whole school of financiers named in the list of seven years ago. It is not an unwholesome sign. There is no doubt that the men who stand to-day at the head of the business of carrying on these big public utility concerns are better men from the standpoint of the country at large than were the older generation who grew powerful and wealthy through exploitation and little else. Time has substituted a group of builders and workers, even though sometimes they may be over-enthusiastic, for a group that marked the very climax of the stock-watering and stock-jobbing finance of the last generation.

This article is not a chronicle. The facts so far recorded have been illustrations only. They do not pretend by any means to exhaust the record of the sweeping changes that have been made in the administration and ownership of the corporations and institutions that stand as the most powerful elements in American business. It will be noted that in almost every instance cited, and in almost every phenomenon that has been noted by any financial critic in the last two years, the keynote is no longer combination and concentration of capital or of power. Indeed, it has been decentralization and a destruction more or less complete of everything that looked like an autocracy. Business has tended, in fact, more and more toward democracy. Men have been robbed of imperial power, sometimes by death and sometimes by rebellion. In practically no case of importance has a despotism continued from one administrative generation to another.

The result has been an end of the making of trusts. Not a single new combination of great importance has been organized and floated in the last seven years. Even in the automobile business, which was new enough to lend itself to almost any form of development, the attempts to make overwhelmingly powerful aggregations were only two in number. One of them resulted very well; but everybody knows that the General Motors Company has exercised but little the kind of power that the Trusts of the former generation exercised. The other, the United States Motor Company, resulted in a quick and painful collapse. And many of the best and strongest motor manufacturing companies remain to this day independent entities and are likely to remain so indefinitely.

The negative result, then, has been that no more Trusts of importance have been created. Let us review briefly the kind of financial operations that have kept the mills of finance turning, remembering as a primary consideration that the great financial machinery which in the ten years prior to 1907 turned out a hundred great

combinations of capital, and financed the most remarkable era of railroad expansion that the country has ever seen, has continued to exist to this day and has presumably made a living even though not a single new trust of importance and not a single new railroad financial campaign has been financed in the United States. Whence, then, has come the business upon which the financial world has subsisted?

To answer that question, I have studied the record of the financing during the first ten months of 1912. It totals about $1,700,000,000. In that immense figure there is not included the capitalization of a single Trust or large combination that is new. There is, however, included a relatively small amount, $125,000,000, of financing for old combinations.

There is also included a considerable amount of railroad financing, but none of it is new in the sense that it represents new corporations being organized. The great bulk of it consists of relatively small amounts of bonds issued by established railroads under old mortgages.

The January list consisted of twenty-seven items totaling $133,000,000. Of the twenty-seven companies, only five wanted $10,000,000 or more apiece, and seven wanted less than $1,000,000. The February list embraced thirty-five companies, borrowing $176,000,000; six of them wanted more than $10,000,000 apiece. In March, thirty-eight companies borrowed $193,000,000, and only six of the thirty-eight ran into eight figures. In April, thirty-one companies borrowed about $206,000,000 and eight of them wanted $10,000,000 or more. In May, thirty-two companies asked for about $310,000,000; five of them borrowed in eight figures and one, the Interborough Rapid Transit Company of New York, asked for $170,000,000. In June, forty-four companies borrowed about $300,000,000; only five wanted $10,000,000 apiece. In July, twenty-four companies borrowed about $55,000,000, and none of them borrowed more than $5,000,000. Twenty-two companies asked for about $75,000,000 in August, three of them borrowing more than $10,000,000 apiece. In September, twenty-seven corporations asked for $75,000,000, two borrowing more than $10,000,000 each. In October, thirty companies wanted about $105,000,000, only three going over the $10,000,000 mark.

To sum up: In the ten months ending November 1st only one corporation called on Wall Street for $100,000,000 or more. None of the others wanted more than $50,000,000. Only eleven wanted between $20,000,000 and $50,000,000. The rest of the huge aggregate was made up of small financing, as Wall Street regards it. In other words, three quarters of the financing done in the big markets of the United States last year was done in sums ranging from $1,000,000 to $20,000,000.

This study of aggregates seems to indicate that it is an era of little things and little jobs in the financial world. The tremendous campaigns of the late lamented period that saw the financing of dozens of $100,000,000 concerns have vanished — many people think never to return. Even the financing of the Interborough this year, though it went through the hands of the Morgan firm, was immediately split up into dozens of small items and scattered broadcast into all the markets. It still hangs fire and it will probably be years before it is completed.

This is in astonishing contrast to the period in which Mr. Pratt wrote his summary of conditions. He wrote after the climax of what has been called "the hundred million dollar era." In those days probably three quarters of the financial news consisted of records of what was being done by the gigantic combinations of capital which were popularly supposed to have obtained an everlasting grip upon the industries of the country. The headlines were busy with the tremendous doings of Messrs. Harriman, Morgan, and their compeers in railroad finance and in industrial borrowings. The raising of $50,000,000 was almost a picayune job in those days, and subscriptions for it could be obtained almost over night by any one of four wholesale banking houses.

Nowadays, on the contrary, the Wall Street bankers consider $3,000,000 quite a penny; dicker for a month over $5,000,000 bond issues; worry about raising $10,000,000 even for a big corporation;

gasp at $25,000,000 of railroad financing; and throw up their hands in despair when a $50,000,000 proposition confronts them. Banking houses which a few years ago regarded anything beneath $5,000,000 as altogether too small for their consideration now spend most of their time fixing up and selling little blocks of from $1,000,000 to $3,000,000 of public utilities and industrial bonds and stocks.

If the little sums in which Wall Street deals these days are astonishing, the names and characters of the borrowers are even more astonishing. A few years ago it would have been ridiculous to suggest that the smaller rivals of the Steel Corporation, the Standard Oil Company, the National Biscuit Company, the International Harvester Company, or the so-called Fertilizer Trust could have come into Wall Street and borrowed, right under the noses of the bankers who stood sponsors for these Trusts, all the money that they wanted. Yet this year smaller concerns in competition with each of these combinations have sold their securities in this market not only without interference from the bankers of the big combinations, but with their consent, even assistance.

Thus, in these later years, the grip of the giant combinations upon the throat of business in America has relaxed if it has not been entirely broken. Nothing could be much more significant of this change than that Wall Street, which was supposed to be the Exchequer of Big Business, has become a willing servant of relatively little business in the same lines in which the great combinations exist.

This process of decentralizing industry has brought to the front a new school of business men. There is no longer a captain of the sugar industry, of the oil industry, or even of the steel industry. In fact, few men know the names of those who command the concerns that have been the big borrowers and that have enjoyed the largest growth during the last few years in harvesting machinery, in the automobile business, in oil, or in steel.

In the railroad field something a little bit different has been going on. As the need for strong and aggressive apostles of expansion has vanished the type has vanished with it. Instead of a Cassatt on the Pennsylvania, plunging forward for the accomplishment of great ambitions, we have had a canny, steady conservationist, Mr. McCrea, in command of that system, and he has lately been succeeded by Mr. Samuel Rea, probably equally careful and steady. Instead of the boundless ambitions of the Harriman system a few years ago the efforts of that railroad to-day are bent upon holding what it has rather than upon acquiring any larger dominion; and the recent decision of the Supreme Court has made even that impossible. There is not a single big railroad system in the country that is to-day figuring on expansion. Even on the St. Louis & San Francisco, much of whose lines run through half developed territory, the best efforts of Mr. Yoakum and his staff are toward conservation rather than toward creation. The pioneer type and the ambitious, smashing, go-ahead type of railroad owner and administrator has dropped, for the time being, out of sight.

To sum it all up, we are passing through what looks in some of its aspects to be almost a reactionary era. The big manufacturing industries are decentralizing rather than combining. The buying in of railroads to make gigantic systems has almost disappeared, unless one considers the somewhat humble ambitions of Mr. Newman Erb a parallel to the Harriman campaign. In insurance we have gone far backward from the days when Mr. Perkins and his friends conceived a plan that was ultimately to make the New York Life Insurance Company practically the arbiter of life insurance throughout the world, and we have actually established a maximum beyond which neither this company nor any other can write insurance in one year.

Only in the banking world in New York and Chicago the process of centralization seems to go forward in the shape of bigger and bigger mergers of commercial banks and trust companies; but even here one notes that in financial banking it is an era of little things. And there is a reasonable conviction that when Mr. Morgan retires from active business it will not be possible to hold together the banking power that now centres at his desk.

THE NEW FREEDOM

A CALL FOR THE EMANCIPATION OF THE GENEROUS ENERGIES OF A PEOPLE

BY

WOODROW WILSON

II

FREEMEN NEED NO GUARDIANS

THERE are two theories of government that have been contending with each other ever since government began. One of them is the theory which, in America, is associated with the name of a very great man, Alexander Hamilton. A great man but, in my judgment, not a great American. He did not think in terms of American life. Hamilton believed that the only people who could understand government, and therefore the only people who were qualified to conduct it, were the men who had the biggest financial stake in the commercial and industrial enterprises of the country.

That theory, though few have now the hardihood to profess it openly, has been the working theory upon which our Government has lately been conducted. It is astonishing how persistent it is. It is amazing how quickly the political party which had Lincoln for its first leader — Lincoln, who not only denied, but in his own person so completely disproved, the aristocratic theory — it is amazing how quickly that party founded on faith in the people forgot the precepts of Lincoln and fell under the delusion that the "masses" needed the guardianship of "men of affairs."

For, indeed, if you stop to think about it, nothing could be a further departure from original Americanism, from faith in the ability of a confident, resourceful, and independent people, than the discouraging doctrine that somebody has got to provide prosperity for the rest of us. And yet that is exactly the doctrine on which the Government of

the United States has been conducted lately. Who have been consulted when important measures of government, like tariff acts, and currency acts, and railroad acts, were under consideration? The people whom the tariff chiefly affects, the people for whom the currency is supposed to exist, the people who pay the duties and ride on the railroads? Oh! no. What do they know about such matters! The gentlemen whose ideas have been sought are the big manufacturers, the bankers, and the heads of the great railroad combinations. The masters of the Government of the United States are the combined capitalists and manufacturers of the United States. It is written over every intimate page of the records of Congress; it is written all through the history of conferences at the White House, that the suggestions of economic policy in this country have come from one source, not from many sources. The benevolent guardians, the kind-hearted trustees who have taken the troubles of government off our hands have become so conspicuous that almost anybody can write out a list of them. They have become so conspicuous that their names are mentioned upon almost every political platform. The men who have undertaken the interesting job of taking care of us do not force us to requite them with anonymously directed gratitude. We know them by name.

Suppose you go to Washington and try to get at your Government. You will always find that while you are politely listened to, the men really consulted are the men who have the biggest stake — the big bankers, the big manufacturers, the big masters of commerce, the heads of railroad corporations and of steamship corporations. I have no objection to these men being consulted, because they also, though they do not themselves seem to admit it, are part of the people of the United States. But I do very seriously object to these gentlemen being *chiefly* consulted, and particularly to their being exclusively consulted, and if the Government of the United States is to do the right thing by the people of the United States it has got to do it directly and not through the intermediation of these gentlemen. Every time it has come to a critical question, these gentlemen have been yielded to, and their demands have been treated as the demands that should be followed as a matter of course.

The Government of the United States at present is a fosterchild of the special interests. It is not allowed to have a will of its own. It is told at every move, "Don't do that; you will interfere with our prosperity." And when we ask, "Where is our prosperity lodged?" a certain group of gentlemen say, "With us." The Government of the United States in recent years has not been administered by the com-

mon people of the United States. You know just as well as I do — it is not an indictment against anybody, it is a mere statement of the facts — that the people have stood outside and looked on at their own Government and that all they have had to determine in past years has been which crowd they would look on at; whether they would look on at this little group or that little group who had managed to get the control of affairs in its hands. Have you ever heard, for example, of any hearing before any great committee of the Congress in which the people of the country as a whole were represented, except it may be by the Congressmen themselves? The men who appear at those meetings in order to argue for this schedule in the tariff, for this measure or against that measure, are men who represent special interests. They may represent them very honestly; they may intend no wrong to their fellow-citizens, but they are speaking from the point of view always of a small portion of the population. I have sometimes wondered why men, particularly men of means, men who don't have to work for their living, shouldn't constitute themselves attorneys for the people, and every time a hearing is held before a committee of Congress should not go and ask, "Gentlemen, in considering these things suppose you consider the whole country? Suppose you consider the citizens of the United States?"

Now, I don't want a smug lot of experts to sit down behind closed doors in Washington and play Providence to me. There is a Providence to which I am perfectly willing to submit. But as for other men setting up as Providence over myself, I seriously object. I have never met a political saviour in the flesh, and I never expect to meet one. I am reminded of Gelett Burgess's verses:

> I never saw a purple cow,
> I never hope to see one,
> But this I'll tell you anyhow,
> I'd rather see than be one.

That is the way I feel about this saving of my fellow-countrymen. I'd rather see a saviour of the United States than set up to be one; because I have found out, I have actually found out, that men I consult with know more than I do — especially if I consult with enough of them. I never came out of a committee meeting or a conference without seeing more of the question that was under discussion than I had seen when I went in. And that to my mind is an image of government. I am not willing to be under the patronage of the trusts, no

matter how providential a government presides over the process of their control of my life.

I am one of those who absolutely reject the trustee theory, the guardianship theory. I have never found a man who knew how to take care of me, and, reasoning from that point out, I conjecture that there isn't any man who knows how to take care of all the people of the United States. I suspect that the people of the United States understand their own interests better than any group of men in the confines of the country understand them. The men who are sweating blood to get their foothold in the world of endeavor understand the conditions of business in the United States very much better than the men who have arrived and are at the top. They know what the thing is that they are struggling against. They know how difficult it is to start a new enterprise. They know how far they have to search for credit that will put them upon an even footing with the men who have already built up industry in this country. They know that somewhere by somebody the development of industry in this country is being controlled.

I do not say this with the slightest desire to create any prejudice against wealth; on the contrary, I should be ashamed of myself if I excited class feeling of any kind. But I do mean to suggest this: That the wealth of the country has, in recent years, come from particular sources; it has come from those sources which have built up monopoly. Its point of view is a special point of view. It is the point of view of those men who do not wish that the people should determine their own affairs, because they do not believe that the people's judgment is sound. They want to be commissioned to take care of the United States and of the people of the United States, because they believe that they, better than anybody else, understand the interests of the United States. I do not challenge their character; I challenge their point of view. We cannot afford to be governed, as we have been governed in the last generation, by men who occupy so narrow, so prejudiced, so limited a point of view.

The government of our country cannot be lodged in any special class. The policy of a great nation cannot be tied up with any particular set of interests. I want to say, again and again, that my arguments do not touch the character of the men to whom I am opposed. I believe that the very wealthy men who have got their money by certain kinds of corporate enterprises have closed in their horizon, and that they do not see and do not understand the rank and file of the people. It is for that reason that I want to break up the little coterie

that has determined what the Government of the nation should do. The list of the men who used to determine what New Jersey should and should not do did not exceed half a dozen, and they were always the same men. These very men now are, some of them, frank enough to admit that New Jersey has finer energy in her because more men are consulted and the whole field of action is widened and liberalized.

We have got to relieve our Government from the domination of special classes, not because those special classes are bad, necessarily, but because no special class can understand the interests of a great community.

I believe, as I believe in nothing else, in the average integrity and the average intelligence of the American people, and I do not believe that the intelligence of America can be put into commission anywhere. I do not believe that there is any group of men of any kind to whom we can afford to give that kind of trusteeship.

I will not live under trustees if I can help it. No group of men less than the majority has a right to tell me how I have got to live in America. I will submit to the majority, because I have been trained to do it — though I may sometimes have my private opinion even of the majority. I do not care how wise, how patriotic, the trustees may be, I have never heard of any group of men in whose hands I am willing to lodge the liberties of America in trust.

If any part of our people want to be wards, if they want to have guardians put over them, if they want to be taken care of, if they want to be children, patronized by the Government, why, I am sorry, because it will sap the manhood of America. But I don't believe they do. I believe they want to stand on the firm foundation of law and right and take care of themselves. I, for my part, don't want to belong to a nation, I believe that I do not belong to a nation, that needs to be taken care of by guardians. I want to belong to a nation, and I am proud that I do belong to a nation, that knows how to take care of itself. If I thought that the American people were reckless, were ignorant, were vindictive, I might shrink from putting the Government into their hands. But the beauty of democracy is that when you are reckless you destroy your own established conditions of life; when you are vindictive, you wreak vengeance upon yourself; the whole stability of democratic polity rests upon the fact that every interest is every man's interest.

The theory that the men of biggest affairs, whose field of operation is the widest, are the proper men to advise the Government is, I am willing to admit, rather a plausible theory. If my business covers

the United States not only, but covers the world, it is to be presumed that I have a pretty wide scope in my vision of business. But the flaw is that it is my own business that I have a vision of, and not the business of the men who lie outside of the scope of the plan I have made for a profit out of the particular transactions I am connected with. And you can't, by putting together a large number of men who understand their own business, no matter how large it is, make up a body of men who will understand the business of the nation as contrasted with their own interest.

In a former generation, half a century ago, there were a great many men associated with the Government whose patriotism we are not privileged to deny nor to question, who intended to serve the people, but had become so saturated with the point of view of a governing class that it was impossible for them to see America as the people of America themselves saw it. Then there arose that interesting figure, the immortal figure of the great Lincoln, who stood up declaring that the politicians, the men who had governed this country, did not see from the point of view of the people. When I think of that tall, gaunt figure rising in Illinois, I have a picture of a man free, unentangled, unassociated with the governing influences of the country, ready to see things with an open eye, to see them steadily, to see them whole, to see them as the men he rubbed shoulders with and associated with saw them. What the country needed in 1860 was a leader who understood and represented the thought of the whole people, as contrasted with that of a special class which imagined itself the guardian of the country's welfare.

Now, likewise, the trouble with our present political condition is that we need some man who has not been associated with the governing classes and the governing influences of this country to stand up and speak for us; we need to hear a voice from the outside calling upon the American people to assert again their rights and prerogatives in the possession of their own Government.

My thought about both Mr. Taft and Mr. Roosevelt is that of entire respect, but these gentlemen have been so intimately associated with the powers that have been determining the policy of this Government for almost a generation, that they cannot look at the affairs of the country with the view of a new age and of a changed set of circumstances. They sympathize with the people; their hearts no doubt go out to the great masses of unknown men in this country; but their thought is in close habitual association with those who have framed

the policies of the country during all our lifetime. Those men have framed the protective tariff, have developed the trusts, have co-ordinated and ordered all the great economic forces of this country in such fashion that nothing but an outside force breaking in can disturb their domination and control. It is with this in mind, I believe, that the country can say to these gentlemen: "We do not deny your integrity; we do not deny your purity of purpose; but the thought of the people of the United States has not yet penetrated to your consciousness. You are willing to act for the people, but you are not willing to act *through* the people. Now we propose to act for ourselves."

I sometimes think that the men who are now governing us are unconscious of the chains in which they are held. I do not believe that men such as we know, among our public men at least — most of them — have deliberately put us into leading strings to the special interests. The special interests have grown up. They have grown up by processes which at last, happily, we are beginning to understand. And, having grown up, having occupied the seats of greatest advantage nearest the ear of those who are conducting government, having contributed the money which was necessary to the elections, and therefore having been kindly thought of after elections, there has closed around the Government of the United States a very interesting, a very able, a very aggressive coterie of gentlemen who are most definite and explicit in their ideas as to what they want.

They don't have to consult us as to what they want. They don't have to resort to anybody. They know their plans, and therefore they know what will be convenient for them. It may be that they have really thought what they have said they thought; it may be that they know so little of the history of economic development and of the interests of the United States as to believe that their leadership is indispensable for our prosperity and development. I don't have to prove that they believe that, because they themselves admit it. I have heard them admit it on many occasions.

I want to say very frankly that I do not feel vindictive about it. Some of the men who have exercised this control are excellent fellows; they really believe that the prosperity of the country depends upon them. They really believe that if the leadership of economic development in this country dropped from their hands, the rest of us are too muddle-headed to undertake the task. They not only comprehend the power of the United States within their grasp, but they comprehend it within their imagination. They are honest men, they have just as

much right to express their views as I have to express mine or you to express yours, but it is just about time that we examined their views and determined their validity.

As a matter of fact, their thought does not cover the processes of their own undertakings. As a university president, I learned that the men who dominate our manufacturing processes could not conduct their business for twenty-four hours without the assistance of the experts with whom the universities are supplying them. Modern industry depends upon technical knowledge; and all that these gentlemen do is to manage the external features of great combinations and their financial operation, which have very little to do with the intimate skill with which the enterprises are conducted. I know that men not catalogued in the public prints, men not spoken of in public discussion, are the very bone and sinew of the industry of the United States.

Do our masters of industry speak in the spirit and interest even of those whom they employ? When men ask me what I think about the labor question and laboring men, I feel that I am being asked what I know about the vast majority of the people, and I feel as if I were being asked to separate myself, as belonging to a particular class, from that great body of my fellow-citizens who sustain and conduct the enterprises of the country. Until we get away from that point of view it will be impossible to have a free government.

I have listened to some very honest and eloquent orators whose sentiments were noteworthy for this: that when they spoke of the people, they were not thinking of themselves; they were thinking of somebody whom they were commissioned to take care of. They were always planning to do things for the American people, and I have seen them visibly shiver when it was suggested that they arrange to have something done by the people for themselves. They said, "What do they know about it?" I always feel like replying, "What do *you* know about it? You know your own interest, but who has told you our interests, and what do you know about them?" For the business of every leader of government is to hear what the nation is saying and to know what the nation is enduring. It is not his business to judge *for* the nation, but to judge *through* the nation as its spokesman and voice. I do not believe that this country could have safely allowed a continuation of the policy of the men who have viewed affairs in any other light.

The hypothesis under which we have been ruled is that of government through a board of trustees, through a selected number of the

big business men of the country who know a lot that the rest of us do not know, and who take it for granted that our ignorance would wreck the prosperity of the country. The idea of the Presidents we have recently had has been that they were Presidents of a National Board of Trustees. That is not my idea. I have been president of one board of trustees, and I do not care to have another on my hands. I want to be President of the people of the United States. There was many a time when I was president of the board of trustees of a university when the undergraduates knew more than the trustees did; and it has been in my thought ever since that, if I could have dealt directly with the people who constituted Princeton University, I could have carried it forward much faster than I could dealing with a board of trustees.

Mark you, I am not saying that these leaders knew that they were doing us an evil, or that they intended to do us an evil. For my part, I am very much more afraid of the man who does a bad thing and does not know it is bad than of the man who does a bad thing and knows it is bad; because I think that in public affairs stupidity is more dangerous than knavery, because harder to fight and dislodge. If a man does not know enough to know what the consequences are going to be to the country, then he cannot govern the country in a way that is for its benefit. These gentlemen, whatever may have been their intentions, linked the Government up with the men who control the finances. They may have done it innocently, or they may have done it corruptly, without affecting my argument at all. And they themselves cannot escape from that alliance.

Here is the old question of campaign funds: If I take a hundred thousand dollars from a group of men representing a particular interest that has a big stake in a certain schedule of the tariff, I take it with the knowledge that those gentlemen will expect me not to forget their interest in that schedule and that they will take it as a point of implicit honor that I should see to it that they are not damaged by too great a change in that schedule. Therefore, if I take their money, I am bound to them by a tacit implication of honor. Perhaps there is no ground for objection to this situation so long as the function of government is conceived to be to look after the trustees of prosperity, who in turn will look after the people; but on any other theory than that of trusteeship no interested campaign contributions can be tolerated for a moment — save those of the millions of citizens who thus support the doctrines they believe and the men whom they recognize as their spokesmen.

I tell you the men I am interested in are the men who, under the conditions we have had, never had their voices heard, who never got a line in the newspapers, who never got a moment on the platform, who never had access to the ears of Governors or Presidents or of anybody who was responsible for the conduct of public affairs, but who went silently and patiently to their work every day carrying the burden of the world. How are they to be understood by the masters of finance, if only the masters of finance are consulted?

That is what I mean when I say, "Bring the Government back to the people." I do not mean anything demagogic; I do not mean to talk as if we wanted a great mass of men to rush in and destroy something. That is not the idea. I want the people to come in and take possession of their own premises; for I hold that the Government belongs to the people, and that they have a right to that intimate access to it which will determine every turn of its policy.

America is never going to submit to guardianship. America is never going to choose thralldom instead of freedom. Look what there is to decide! There is the tariff question. Can the tariff question be decided in favor of the people, so long as the monopolies are the chief counselors at Washington? There is the currency question. Are we going to settle the currency question so long as the Government listens only to the counsel of those who command the banking situation?

Then there is the question of conservation. What is our fear about conservation? The hands that are being stretched out to monopolize our forests, to prevent the use of our great power-producing streams, the hands that are being stretched into the bowels of the earth to take possession of the great riches that lie hidden in Alaska and elsewhere in the incomparable domain of the United States, are the hands of monopoly. Are these men to continue to stand at the elbow of government and tell us how we are to save ourselves — from themselves? You can not settle the question of conservation while monopoly is close to the ears of those who govern. And the question of conservation is a great deal bigger than the question of saving our forests and our mineral resources and our waters; it is as big as the life and happiness and strength and elasticity and hope of our people.

There are tasks awaiting the Government of the United States which it cannot perform until every pulse of that Government beats in unison with the needs and the desires of the whole body of the American people. Shall we not give the people access of sympathy, access of authority, to the instrumentalities which are to be indispensable to their lives?

THE BATTLE LINE OF LABOR

FOURTH ARTICLE

WILL THERE ALWAYS BE WAR?

THE SPIRIT OF CONCILIATION, AGREEMENTS FOR COLLECTIVE BARGAINING, AND THE GROWTH OF PUBLIC INTEREST IN THE CONFLICT AS HOPEFUL SIGNS OF A COMING DAY OF COMPARATIVE INDUSTRIAL PEACE

BY

SAMUEL P. ORTH

FROM one point of view the outlook is pretty discouraging. No other social or economic "problem" has seeped so many suggestions and plans, so much wisdom and folly, out of the modern brain. Economists, clergymen, lawyers, editors, demagogues, poets, philosophers, laborers, financiers, politicians, and statesmen, in every industrial country have for four generations proffered their advice. And where are we? Taken at their very best, the experiences of other lands are not very encouraging.

This tallies with our own experience. Some of our states, notably Massachusetts, New York, and Wisconsin, have carefully-organized departments of labor and boards of conciliation and arbitration. The Federal Department of Labor has made exhaustive studies of various phases of our industrial life. We have all sorts of organizations for trying to "solve the problem." The reader knows that neither private organization nor public endeavor has diminished the intensity of the war.

"Ninety per cent. of the labor troubles are due to trivial differences and could be avoided by the exercise of patience and caution," Mr. P. J. Downey, for many years a member of the New York Board of Mediation and Arbitration, told me.

Then why this muddle? Because, as a distinguished German jurist said, we are all human beings. This may seem to you a very unsatisfactory answer, and may invite your impatience. But isn't it the only true answer? If it were a problem in algebra, the mathematicians would have solved it long ago. But it is a problem of no artificial x; it is a problem of the human x, and no juggler of equations can find the ultimate answer.

For, happily, the human x is a variable quantity, eternally variable, and no one can ever tell what action a given combination of temperaments and instincts will produce.

This is not pessimism. Because there is more optimism in human nature than pessimism. But it doesn't operate on a lightning schedule. The history of human doings shows that there is a slow, glacier-like movement, that goes stubbornly forward, like a river of ice, tearing, grinding, and polishing the granite of opposition, until it reaches the sea, whence it had its origin. This is the movement of Public Opinion, or Public Conviction, or the Judgment of the Mass, or whatever you please to call it. When it once forms — it takes nearly as long to form it as it does, through the circulation of mist and snow, to make continental ice from the ocean spray — but when it once forms, it is a lasting congealation and becomes a part of our era, just as the glacier forms a part of the geological epoch of its time.

There are certain optimistic tendencies shaping themselves in the United States. First: A fruitful cause of rupture between employer and employees was the refusal of the employers to meet their men and discuss grievances. For years, employers resisted all attempts on the part of the men to approach them on any subject pertaining to "running the business." It was perfectly natural for a man to think that ownership of the factory carried with it complete dominance of the factory

workmen. There were a good many thousand years of race heredity, emphasizing the possessive case, back of this idea of owners of factories.

Gradually this attitude of isolated ownership has been waning. To-day few masters deny themselves to their men. There are, of course, many employers who will not meet union committees, but they will meet their own men and talk over grievances. It does not take a long memory to reach back to the time when this did not take place. Many an old workman, and old employer, too, can recall the days when a man with a complaint was promptly fired. I do not believe that this is the rule to-day.

Mr. George E. Emmons, general manager of the General Electric Company, Schenectady, N. Y., voices the practice of the cautious and successful manager of to-day. He has 15,000 men under his care. "I keep closely in touch, through our superintendents and foremen, with general shop conditions. And, as far as practicable, all important labor matters which are likely to reach an acute stage and possibly precipitate trouble, are promptly brought to my attention. I have found that in most cases trouble with help can be avoided by a frank talk with the interested individuals. Every employee in the plant has access to me, and I endeavor to treat all complaints without prejudice."

Here is the recognition of the human element. You don't sit down and talk a thing over with a sewing machine or with a drill press. You tinker with the machine and if it cannot be fixed you throw it on the scrap heap. Men used to be treated worse than the machinery. They were turned out on to the scrap heap without any attempt at tinkering or repairing.

Another manager, in a large machine shop, said: "I am always glad to talk things over with my men. Frankly, I don't find them any different from the board of directors, all human, all subject to bad spells. A man comes to me grumbling about everything and wanting to quit. If he is a good workman, I tell him to go home, take a pill, get a good sleep, and the next day he is over his bad liver and his eyes are bright. I feel that way myself sometimes — want to throw the job over. If a committee of the men came to me when I had a spell like that, we probably would have a strike."

The development of the corporation, with its impersonal machinery, has made this question of personal contact a difficult one. The International Paper Company, which recently passed through a series of strikes, has attempted to reach the men by an industrial engineer, who devotes all of his time to keeping in touch with the men.

That is really the gist of the situation, this personal equation. Any manager of a year's experience knows how difficult it is to get shop foremen. The best workman does not always make the best foreman. It requires personal endowments that are above skill; the "capacity to handle men," we call it. But it really is the capacity to use men without handling them.

A great many men are to each other like flint and steel, and start a fire the moment they meet.

Here is an illustration, told by Mr. S. E. Heberling, president of the International Switchmen's Union: "A few years ago a big strike occurred in the Northwest. It was really brought on by two men who were temperamentally out of tune. The switchmen's committee finally arranged a meeting with the railroad officials' committee. Now the heads of those two committees clashed, neither exercised the diplomacy the occasion demanded, neither acted as a representative should act, and a strike followed."

The average man needs personal recognition, and the average employer is too apt to overlook this basic trait. Many a man joins a union through his craving for fellowship, and he knows the employer and the foreman are only human beings like himself.

This is what Mr. Henry Abrahams, secretary of the Boston Cigar Makers' Union, meant when he related his experience in adjusting a dispute which recently threatened a Boston shop with disruption. "I found the men in a discontented mood. Not over wages or hours, but over some-

thing the boss had neglected. So I went to the employer and told him to say 'Good morning' to the boys when he came down to the shop. He looked at me in surprise. He supposed his duty was done when he complied with the law and paid the wages. A personal kind word is a cheap remedy for half the trouble an employer has with his men."

This kindness is sometimes rebuffed. One employer told me disconsolately how he had done everything he could for his men, set up all sorts of conveniences in his works, but they did not appreciate them, they thought only of their wages. Now, there is a difference between men and communities. What in some places would be gratefully accepted, in others would be spurned as charity.

And then some employers have told me that you must not be too cordial with your men! They will take undue advantage of familiarity!

There are all sorts of people in the world; but whatever may be the corkscrew twist in some natures, the human basis must be the starting point of every effort that human beings make to get together.

II.

The second hopeful evidence of the recognition of the human element is the beginning of collective bargaining. This has been in vogue in England a good many years. It is quite new here. The first collective agreement made in America was between the International Iron Molders' Union and the Stove Founders' Defense Association. It has weathered twenty-two years of criticism, time enough to test it. The iron molders and the stove founders are both good fighters. The stove founders organized a defense association and for some years carried on a destructive warfare with the molders' union, culminating in the big strikes at Albany and Troy, then among the largest stove centres of the United States. In the Defense Association were several men, including Jeremiah Dwyer and Henry Cribben, who had worked as molders and knew the details of the trade. This was of great importance to both sides. Martin Fox, the leader of the molders, was in some respects the biggest man that the union movement has produced in America. These men got together. A conference was arranged, and from that time there has been a yearly conference, which arranges wage schedules and appoints a conference committee of six men from each body. This committee is the medium of unified action.

Mr. Thomas Hogan, who has been secretary of the Defense Association almost since its beginning, said: "Some of the members are not entirely satisfied with the agreement, but on the whole the agreement works well and is infinitely better than the continuous strikes we used to have. As a body, the union lives up to the agreement. There are individual cases where men quit work contrary to their contract without referring their trouble in accord with the rules. The national officers at once order them back to work.

"We had similar agreements with the stove mounters' and the polishers' unions, but, after a few years' trial with them, were obliged to discontinue agreements with them. They have frequently gone out on strikes, and asked the molders to go out in sympathy, but the molders have always refused on the ground that their arrangements with us prevented them.

"We meet every year, and out of the twenty or more suggestions that the unions bring, one or two may be adopted. During twenty-two years we have adopted only twenty-eight clauses in this agreement with the men."

I talked with a number of stove manufacturers who are members of the Defense Association, and all of them agreed that the present system is better than the former method of fighting. Some of them complained that they had a good deal of difficulty in keeping men at work when a difference arose. They would walk out in spite of their agreement, and only the insistence of the national officers would impel them to return, and even then valuable time is lost in the parley.

It is natural that some of the manufacturers, who are not in the Defense Association, do not look upon it with favor. I was told that some of these concerns had been refused admission to

the Association on account of their treatment of their men. On the other hand, it was suggested by some founders that the stove business lends itself to such an agreement because the manufacturers could virtually control the price of the output, and so raise the price of stoves to meet the demands of the unions. However, the competition of manufacturers not in the Association is sufficient to disprove this statement.

At any rate, as nearly as I could determine, the agreement is considered a step forward. I have found no members of the Defense Association, even those inclined to find fault with the way their men, as individuals, treat their contract and their molding machines, who would be glad to go back to the conditions that prevailed twenty-five years ago.

President Valentine, of the molders, struck the nail on the head: "We have learned to negotiate as well as to fight." That is a long step forward. When I asked him about union men breaking their agreement he admitted that that occurred occasionally, but declared that efforts were made to stop it. Three local unions have had their charters recalled for such action. "There are unreasonable union men," he said, "as well as unreasonable employers. No one is perfect. We do our best to reach an agreement, and the vast majority on both sides endeavor to live up to it."

Mr. Lazard Kahn, representing the Defense Association at the recent unveiling of a monument to Martin Fox, summarized the effects of this getting together: "Employment at fair wages, discipline, respect for constituted authority, have taken the place of disorder, prejudice, and strife. It is an achievement of which the stove industry and the industrial world may well be proud, and which all other industries might well and profitably emulate. Without such benign agency and tribunal, anarchy must again reign."

Let no reader think the millennium is at hand. The stove makers have to exercise constant vigilance and patience, on both sides, to keep up the equilibrium. The union must punish the irresponsible and the rash; the Association must chide the arbitrary and the greedy. The variable elements in human nature never permit us to fold our hands and say: "There, now, I've settled that perplexing problem, and can take it easy."

These same molders are in constant turmoil with other founders. President O. P. Briggs, of the National Founders' Association, says: "The National Founders' Association was organized for the special purpose of endeavoring to establish an amicable agreement between molder and employer, through the medium of the molders' union. To this end, seven years of energetic, painstaking, able, and conscientious work were devoted by the most representative class of employers of foundry labor in the United States and Canada. More than 2,500 conferences were held between the molders' union, or its representatives, and the National Founders' Association, or its representatives. This experience, covering seven years' work, proved conclusively that the union of iron molders did not at any time intend to recede an iota from its determination to enforce its strictly closed shop constitution and by-laws.

"The issues upon which disagreement finally prevailed between the molders' union and the National Founders' Association are not disputed, the one issue outweighing all other issues combined being that of the limitation of apprentices, which means: Shall the American boy be granted an opportunity to learn a trade or not?"

President Valentine, of the Molders' International Union, said the issue was virtually on the acceptance of compulsory arbitration. He said the molders are in favor of conciliation, but against compulsory arbitration. "The principles laid down by the foundrymen are such that we cannot accept. They virtually divest us of all power, and leave everything in the hands of the Founders' Association."

So here we have a powerful union, and a great industry, both bifurcated as to practice: one branch of the industry in peaceful coöperation with the union, on the basis of a common agreement; the other branch fighting the same union on the basis of common antagonism. I

have heard very bitter words against the stove founders for "selling out to the unions." I have listened to equally severe criticisms of the machine founders for not being willing to meet the unions on "a reasonable basis."

There are other trade agreements. I will mention a few of these briefly. The railway brotherhoods have agreements with the lines they operate. The switchmen's union, one of the younger r ilway unions, has brought system into a trade that was peculiarly haphazard. In 1910 they made an agreement with a number of Western railroads. President Heberling, of the union, told me: "The union has discouraged drunkenness, raised the standard of the men, and raised their wages 40 per cent. in seven years. The other day I talked with a railroad superintendent and he rather complained that we had raised wages so high and cut hours so low. I asked him if he would prefer to go back to the old conditions of anarchy and he said, 'No.'"

Nor have I found any employers who have made collective agreements who would relish going back to the old conditions, much as they deplore the fact that they are no longer complete masters of their shops.

Even the longshoremen, whose hard and rough work has not lured the soft and easy man, have a union that has standardized the work and made collective agreements. Mr. J. J. Joyce, the national secretary of the union, said: "Trade agreements have been a great help to both sides. The employers at first bitterly opposed them — said they would run their own business. But very few of them would go back to the old days of confusion, if they had the option. Our great trouble has always been in getting employers to consult with us. They think they are surrendering something. But if you can get two men to talk things over, half the battle is won."

The newspaper publishers have a National Association, with local branches in the principal cities, whose object is "to maintain right relations between its members and the workmen in the printing trades employed by them." These associations have arrangements with the typographical, pressmen's, and stereotypers' unions. The agreement with the typographical union is fairly successful. It is praised more by the officers of the union than by the employers, although I have not come across any newspaper publisher who would admit that he would like to go back to the old conditions.

The boot and shoe makers, under the leadership of Mr. John F. Tobin, have a collective contract, which permits every local shop to fix its own wages, by conference. That is, there is no universal wage scale. I was told by Mr. Tobin that 40 per cent. of the shoe workers are organized. He said that his greatest difficulties were: first, to get the employer to see the value of a collective agreement; second, to get some of the more radical union men to see that a contract is a two-sided affair.

A prominent shoe manufacturer in Massachusetts, who has run the whole gamut of experiences, told me how the Brockton manufacturers got together with the unions: "We were always in trouble. The unions were organized in nearly every branch — the stitchers, cutters, etc.— and every once in a while one of these unions would make demands or go out on a strike and leave us in the lurch. We could never tell whether we could fill our orders. Finally, the Brockton manufacturers got together and said this chaos must be stopped. The outcome was a single association of manufacturers on one side and a single union, that embraced all the shoe-making trades, on the other. This reduced the parties to two, and we could bargain. To-day, we have a contract with the union, pay an agreed wage, and submit differences to the State Board of Arbitration.

"This agreement works fairly well. Of course, some things come up that we think petty — but patience overcomes them. We are insured against strikes; that's the principal advantage. That is, we are insured so long as the men keep their agreement. Several times they have grown restless and recalled their contract. But, after careful thought, they have renewed it again. Taking everything

into consideration, this plan has been the most satisfactory we have ever tried."

An official of a Fall River cotton mill told me the story of the last example of collective bargaining I will give: "Formerly we had continual labor trouble. After the big strike, eight years ago, the mill owners organized an association and we began to hold conferences with the textile council. When we first met, we were suspicious of each other. The workmen sat in one corner and we in another. Gradually we came together, and now we meet around a table, just like a board of directors, and discuss things frankly. There has been a noticeable improvement in the spirit of the men since this conference was inaugurated. They see we don't make money as easily and rapidly as they supposed, and we are learning their troubles. Just now we are settling, quietly, a difference with the loom-fixers. Of course, there is some friction, especially with the radicals. But good sense, as a rule, prevails."

Mr. Thomas Taylor, secretary of the Fall River loom-fixers — one of the careful, hard-headed, honest, local labor secretaries who save labor's cause from its worst enemy, who is the loud-speaking labor-politician — told me of the adjustment he was making with the mill owners. "The textile council, composed of weavers, loom-fixers, spinners, and carders, reached a wage agreement with the owners this spring. It was not satisfactory to the loom-fixers. Now, instead of striking, as we would have done ten years ago, we took the matter up with the employers' association. And now I have a proposal for a raise in pay to present to my union. It won't please the radical element who are always the trouble makers. But it will satisfy the big majority of the men." This wage adjustment has since been amicably made.

So, you see, a beginning has been made in the getting together. But it is too much to expect that selfish animosities will melt away merely on the voluntary efforts of a few wise employers and a handful of capable, local labor secretaries. Some of these agreements will probably be wrecked by the radicals, in the local unions. These are constantly fomenting distrust, and once in a while will get the upper hand — as among the pressmen of Chicago. Further, the difference in the tone of the unions and their leaders must hamper this movement. For instance, the stove manufacturers can operate on the collective bargaining plan with the molders, but not with the polishers and mounters.

If the employer has gone so far as to admit his men into his office, he has not yet reached the summit of social altruism. He still spurns the Public. We are told to mind our own business. Very well, what is our business? Who uses the coal taken from the earth, and the iron, and the silver? Who depends daily on railroad, and telegraph, and gas main? When Mayor Pingree went to Pullman, in 1894, with the requests of twenty mayors of twenty large American cities, every one a railroad centre, urging the Pullman Company to arbitrate its differences, and they haughtily refused, was it the Public's business?

There is developing a *social consciousness* that will make the individualistic Phariseeism of the last century loom like a dark mountain of barbarism in the background of the new century. Because every invention and discovery dims the line that separates the Thine from the Ours. Industrial altruism sounds like a Chestertonian paradox. But it's on the way. Lord Kelvin and Thomas Edison have done more for this actual brotherhood of man than ancient religions and mediæval philosophies. Because they, and their kind, have knit the world together industrially, made everybody dependent on everyone. When people rely on a process, or machine, or arrangement, for their daily comfort, they are not going to see that arrangement blatantly interfered with.

We may expect a great deal from this social consciousness. For it appeals to the selfishness of the Public. And a brotherhood of self-ism is potent.

Now, this self interest of the Public is already making itself felt by compelling a full, impartial public inquiry before either side can declare war. The Canadian Industrial Disputes Investigation Act

points the way. Such a disclosure disarms both sides of the advantage of secrecy, and by the time the facts are in possession of the public the heads will be cooled and a definite opinion crystalized. Massachusetts has the beginnings of this kind of procedure. But her statutes are not clear enough on this point of compulsory investigation. The recent elevated strike was publicly investigated soon after it was called. I found the opinion prevalent among Boston workmen that, if the disclosures made by this investigation had preceded the strike, no open rupture would have occurred.

III

To the hopeful signs, I will add the organization of employers. These employers' "unions" foster a spirit of group responsibility and help destroy the poisonous suspicions that competitors have of one another. One of the iron founders told me that when they gathered for their first meeting at Pittsburg, some of the men would not speak to each other because of some bitter experiences in competing for business. I asked a prominent manufacturer in one industry that has had constant labor troubles why they did not organize to handle the situation. "Because we are all afraid of one another — we may disclose trade secrets!"

Local organizations, like the Brockton shoe men and the Fall River textile manufacturers, will have the best effect on the labor situation, for every dispute must be settled in the light of local conditions.

It is not a drain on the imagination to look for a time when many industries will be organized both locally and nationally, somewhat as the metal trades and the newspaper publishers are organized. Some of these will be organized to fight the unions; and the unions will give them plenty of fighting. Some will be organized, as the stove founders, to see what bargaining will do. Maybe, some that are meant for fighting will, after a while — a long while — try negotiating.

At any rate, it is encouraging to see the employers organize. It gives a system to the guerilla warfare. System is a sign of progress. Because bargaining never succeeds unless it is backed by system on both sides.

It is, then, on the increasing recognition of the personal element, and in the slow development of the social consciousness, that the hope lies. Outside the pale of personality, in the cold, impersonal atmosphere of the "economic man," there is no hope.

It is the duty of the Public to see to it that *neither side shall dominate*. The labor leader who told me that domination by the unions would be unendurable was right. Domination means coercion, coercion means eruption; the coerced won't stay under. Domination by the unions means arrogance; domination by the employers means oppression.

The slow-forming opinion of the public is moving in this direction. There is, for instance, a well established notion that something must be done for aged workmen. Over and over again employers have told me an old age pension must be devised. Ten years ago, you did not hear men in America talk of justice to the superannuated.

So there has, among workmen, developed a strong sentiment for sobriety. There is much less drunkenness among workmen than there was twenty years ago. This is not due to temperance societies. It is due to the sensible, slow-forming opinion of the workmen themselves.

Now, in this way, all great questions are ultimately determined. And whatever industrial equilibrium may be reached must come through the dictum of a united Public conscience.

Meanwhile, we must not forget that, though human experience is variable, it is, after all, rarely novel. Cardinal Manning told the bankers of London: "Once it was merrie England, now it is busy England." Was the shift worth while?

And how much progress has the social-consciousness made since the noble and versatile Cicero, the pagan orator, said: "One thing ought to be aimed at by all men: that the interests of each individually, and of all collectively, should be the same. For if each shall grasp at his individual interest, all human society would be dissolved"?

THE SCANDAL OF THE FEDERAL APPROPRIATION BILLS

THE SCRAMBLE TO GET MONEY FROM CONGRESS FOR LOCAL EXPENDITURE REGARDLESS OF NATIONAL INTERESTS OR STATESMANLIKE ECONOMY — HOW THE TREASURY IS RAIDED TO SECURE THE REËLECTION OF CONGRESSMEN — A DISGRACEFUL WASTE OF PUBLIC FUNDS AND HOW IT MAY BE PREVENTED

BY

THEODORE E. BURTON

(SENATOR FROM OHIO)

One of the most unpleasant phases of a Senator's life is the attention which is demanded for matters of comparatively small importance and the neglect of questions which should be of chiefest interest to all the people. It would seem at times as if there were a more eager interest in appointments to post-offices than in great policies which have to do with the general welfare.

If a Senator devotes his time to the consideration of public questions of supreme legislative importance, he must subordinate matters of party patronage. Otherwise he will find that his time is entirely consumed in determining who shall be appointed to post-offices and other minor positions of a public character. This serves both to detract from his usefulness and to arouse bitter enmities. I have steadfastly refused to permit minor questions of patronage to distract my attention from the larger problems which face the American people.

THE worst element of our legislation is its utter selfishness. This nowhere appears to worse advantage than in the constant tendency to parcel out, district by district, the money carried by the most important appropriation bills, with the very evident purpose of merely helping members of Congress to reëlect themselves. Local and personal interests are advanced without regard to the welfare of the Nation. In Congress to-day it is almost impossible to secure consideration for a bill embodying principles of broad statesmanship because of the insistence of these private measures.

The Secretary of War has recently attracted the attention of the public by his frank and courageous efforts to reëstablish the army upon a basis of military efficiency rather than of subservience to local interests and political expediency. The mobile army of the United States is scattered among forty-nine posts. Why has the army been divided into this absurd number of inefficient units? Secretary Stimson replies, "Local and political influences."

Every effort to enforce a rational plan of concentration has inspired an avalanche of protests from private citizens, chambers of commerce, city councils, governors, and members of both Houses of Congress. These army posts are considered an asset to a community because of the supplies purchased for their maintenance, their band concerts, interesting drills, attractive parks. In the language of the Secretary of War, "Against such practical and plainly evident reasons for the maintenance of a post near his home town, the average citizen is apt to attach little importance to projects based on purely military necessity, and in which he is apt to take but very little interest." To the disinterested citizen the idea is manifestly ludicrous that our army should be maintained primarily for the purpose of furnishing a market for the commodities of some particular town or providing band concerts for the delectation of its citizens. Yet this situation is typical of most of our legislation and of the attitude of the majority of the people toward it — urging purely local interests at the expense of the public welfare.

The same situation prevails in the various departments and is equally conspicuous in the navy. For years the officials of the navy have sought to establish that branch of the service upon a basis of military efficiency and their efforts have been embarrassed by the selfishness and insistence of local interests. Manifestly a naval base ought to be determined with reference to its natural advantages, its strategic location, the possibility of defense, the size of its harbor, and other similar considerations, all of a military nature.

Now we have eleven navy yards of the first and second class while England, with a navy twice as large as ours, has but six. Yet we do not possess a single navy yard where we could at one time dock a squadron or a fleet. In the debate on the naval appropriation bill of 1909 this question of the multiplicity of petty naval bases was raised by a member of the Senate from one of the Rocky Mountain states. In answer to the criticisms thus projected a member of the Senate from South Carolina frankly said: "It comes with bad grace from men on that side who have been getting their share of chicks and eggs from the National Government to get up and captiously criticise the rest of us who are only doing the same thing."

For years we have been struggling under a vicious system of river and harbor improvements. For instance, the River and Harbor bill of 1910 contained items favoring 296 out of the 391 Congressional districts. This bill was a masterpiece of geographical distribution and a striking tribute to the cohesive power of legislative log-rolling. Even the obstacle offered by mountains of considerable size did not prevent certain portions of the country from being represented in this bill.

Now there are two ways of framing a River and Harbor bill. The popular method of drawing a bill is to make such concessions to all the different states and localities that you will have an overwhelming support for the measure. The other method, and the right one, is to select those projects which would benefit the whole country and then finish them with promptness. The first method is irresistible. It will win every time — consult the wishes of the varied localities and projects of the country and they will all join together and pass a bill.

In a speech on the floor of the Senate in 1910 I discussed at some length this question of pork barrel legislation as it relates to our river and harbor bills and instanced many items of that bill in support of my contentions. In the first place the financial considerations of maintaining the solvency of the Government compel a limitation upon the amount which may be appropriated in any one year for the improvement of our waterways. Thus, in order to scatter this amount over a large number of districts, the individual amounts are necessarily small. The result is that an improvement which is legitimate and which could be finished within three or four years, and which in the interests of commerce ought to be finished within that time, will be dragged out indefinitely because only a small amount is annually allotted to it. These piecemeal appropriations are in many instances ridiculous. Let me cite briefly two examples to which I then called attention. Something more than $1,500,000 have been expended on the Sandy Bay harbor of refuge in Massachusetts where work has been in progress since 1885. Five million dollars approximately are required to complete this ambitious project. In 1910 the corps of engineers, in charge of all Government works, recommended that $500,000 could be profitably expended there that year. Yet the act provided for only $100,000. At that rate of progress work will not be completed at that point for fifty years.

This policy of piecemeal appropriations encourages extravagance and the adoption of injudicious and wasteful projects merely for the purpose of spending money in the greatest possible number of districts. When you give small appropriations to a large number of items it is an invitation to every Congressman who has a harbor, a creek, a well-developed spring, to come in and ask for an appropriation in these bills. It is a very simple matter to come to Congress and secure $100,000 on a project that will cost a million or two millions. One hundred thousand is not regarded as a very

large sum. It is considered that one Congressional district ought to have that much recognition of the fact that it is on the map and that its member is active here in Congress. When the $100,000 is appropriated, it is very easy to come to Washington again and say: — "What! Will Congress, after it has committed itself to this great project, although costing a million dollars or more, drop it after $100,000 has been spent and let the money expended be buried in the sea?"

In this way I have seen the most unwarranted and extravagant enterprises undertaken — apparently not so much to improve our waterways as to put the Government's money into circulation in the various Congressional districts in order to improve the chances of the different members of Congress for reëlection.

FREIGHT AT $806 A TON

The Red River, in Louisiana, Arkansas, and Texas, is another example of ill-advised improvements. The Government has expended about $3,000,000 on that stream. For the last year traffic over this stretch of 476 miles below Fulton Harbor, aside from the saw logs which could be floated without any improvements, was 10 tons of grain, 16 tons of provisions, 26 tons of fish, and 10 tons of ice. In all, 62 tons were carried on these 476 miles of river. The River and Harbor bill of 1912 carries an appropriation of $50,000 for this stretch of the Red River. That is at the rate of $806 for every ton of merchandise or grain carried on that river the preceding year. The amount expended for the year is practically eight times as much as all the value of the merchandise and freight carried. Two years ago it was 835 tons, and now it has dropped to 62 tons.

It would, I think, be a long step toward bettering conditions if those who propose these improvements had that responsibility which comes from paying a portion of the expense — in short, if local communities were forced to share, with the general Government, the cost of such projects.

It takes a rare form of courage to meet public opinion and to oppose it when it is wrong. It is difficult to resist the pleadings of constituents or to withstand the urging of associates in the House and Senate who have favorite projects to advance. It is human nature to follow the line of least resistance.

We will never have a rational system of public works under present methods. The proper way is to take up each item according to its merit, irrespective of location, regardless of the insistence of communities or of members of Congress, and courageously to adopt it and finish it. I know from the experience of twenty years how difficult that is. I know the amount of attack and abuse incurred by those who favor that method. Pungent paragraphs, cutting cartoons, and misrepresentations of motive appear in newspaper columns, and resolutions of condemnation are frequently received from public and semi-public organizations. River and Harbor bills are to-day judged not from the number of meritorious projects included but rather from the distribution of their largesses. That bill is considered ideal which is framed to please the largest number of people and to cater to the selfish demands of the largest number of communities.

About two years ago, in a speech at St. Louis, President Taft, taking an optimistic view of the situation, said:

> But I do think we have now reached the time in the history of the development of our waterways when a new method ought to be adopted. This improvement by the irrigation of arid and sub-arid lands, and all this conservation of resources, is not for the purpose of distributing "pork" to every part of the country. Every measure that is to be taken up is to be adopted on the ground that it is to be useful to the country at large and not on the ground that it is going to send certain Congressmen back to Congress, or on the ground that it is going to make a certain part of the country, during the expenditure of that money, prosperous. . . . The method I am in favor of is this: That we should take up every comprehensive project on its merits, and that we should determine, by every means at our command, whether the country in which that project is to be carried out is so far developed as to justify the expenditure of a large sum in carrying out the project, and whether the project will be useful when done.

And yet the scandal of our river and

harbor appropriation bills is no worse than that of our public buildings. Magnificent public buildings are erected in small towns and inaccessible county seats, not because they are needed, not because the public service will suffer from lack of them — but because a Congressman feels that he should bring home something to his district from the public treasury to show his constituents that he is alive to their welfare and is alert at Washington. Political benefits rather than governmental necessities are the motives uppermost in framing these bills. Let me cite the instances of a few unjustified public buildings scattered here and there through the country. Statesville, N. C., with a population of less than 6,000, boasts a public building which, with the lot, cost $77,137. Biloxi, Miss., is proud of the munificence of a Government which has expended $125,000 for a public building in that city of nine thousand souls. Aberdeen, in that same state, can boast of the efficiency of its representative in Congress who secured from the public vaults the sum of $78,763 for its public building. Aberdeen is a delightful Southern village of about four thousand inhabitants.

Pierre, S. D., is typical. There are 4,200 people in that town. It has cost the Government, for a building and site in Pierre, $175,091. The interest on the investment is approximately $7,000 a year. Is it at all surprising that this is becoming probably the most extravagant Government in the world?

The most discouraging aspect of the system is that instead of improving it is constantly growing worse. Insistent pressure is being exerted upon Congress to enact legislation for the so-called Federal improvement of roads. Such measures would promptly equal the vicious pork barrel features of our public building and river and harbor bills. No one will deny that our roads should be improved to a high degree of excellence. But why should the National Government undertake to improve a road in Nevada, or the people of Maine be taxed for improving a purely local stretch of road in Mississippi? This is a function which belongs purely to the individual states. Why should a state with a highly developed system of public roads be taxed to build roads for a state which has never improved a single mile of its highways? The only excuse to be offered is that it would enable members of Congress to secure additional appropriations for their home districts as a method of campaigning for reëlection.

During the speakership of Mr. Samuel J. Randall, the chair recognized a member for a long speech, when the House was convulsed at the frank declaration: "Mr. Speaker, there are six men in my district after my seat and I must do something to raise the wind." This necessity of "raising the wind" is the basis of our pork barrel plan of legislation.

THE POWER THAT RULES THE CONGRESSMAN

Communities and individuals, backed by a large share of the public press, whose pages teem with demands for economy and with condemnations of Congress for extravagance, are constantly insisting that large and sometimes utterly unjustifiable appropriations be made in their own locality. A member of Congress is told: "If you do not get this appropriation for a public building, or for this river or harbor, or if you do not join in a movement for this new line of activity, you will no longer be returned to office." Of course, no man in public life wishes systematically to adopt a course which will prevent his return to the office which he holds, though some theorists and political scientists seem to think the proper course for a Congressman is to go straight ahead to defeat.

I have heard in the House a two-hour debate as to whether the janitors who had charge of the committee rooms in the Capitol building should be retained during the summer months. This shows a disposition to guard the minutest expense. But that is not the place where money is saved. For effective reform along the line of economy we must abolish the system of favor-trading legislation. And yet I do not think in the last analysis that the blame really lies with the individual legislator. It lies rather with the force back of him — what he deems to be the demand of his constituents. The explanation is to be looked for in that subconscious self-

ishness which seems to underlie all the phases of our life. The individual seems to think that all governmental actions are solely for his individual behoof. And through this distorted medium every act of the Congressman is judged.

I quote from a letter recently brought to my attention:

> I have always been a hard working man for the Republican Party among my friends and have always made good, but it has never gotten me anything. I served eight months in the Spanish War and came back in bad shape. I applied for a pension and was rejected on red tape. Six years ago I applied again with the same results. This all took place under a Republican administration. Put yourself in my place a short time and tell me how you would feel about the Republican Party. I wish to state that if the Republican Party expects anything from me or any one of my many friends they will have to make good and when they do I will make good on my part.

For this man at least the record of the Republican Party was made up on his pension case — not on the tariff question, the trust question, nor any of the other momentous issues of the last decade — it was a failure and to be renounced because his claim to a pension had not been granted. Nor is this an unusual letter.

PERSONAL AND SECTIONAL GREED

Week after week at least 75 per cent. of the mail received by a Congressman consists of letters from constituents who are urging bills or claims of a selfish nature, either local or purely personal. Those of a personal nature may include pensions, claims against the Government, requests for positions or endorsements for those who are seeking promotion in the Government service. Of a local nature are bills to improve rivers and harbors, erect public buildings, and to secure Government appropriations for the establishment of military posts and naval stations. For example, during the last year an ambitious propaganda was undertaken to build a road from Washington to Gettysburg as a memorial to President Lincoln. Other suggested plans for this memorial contemplated the erection of a magnificent monument in Washington. The petitions and letters which were received in behalf of the road were almost entirely from people who were interested in the manufacture and sale of automobiles and their parts. These were interested from the purely selfish standpoint of promoting the automobile industry. Not a single letter was received on the subject from any of the old soldiers whom Lincoln had so loved or from colored men whom he had freed, urging unselfishly the erection of a monument on which should be graven the story of his life and martyrdom. This system of self-seeking is essentially non-partisan. The beneficiaries are of all parties. All sections benefit by its extravagance.

Political preferment is the reward promised the disciple of extravagant appropriations. Meanwhile local obloquy is visited upon those in public life who advocate economy. And the man who secures an appropriation for a river improvement or a new public building is more widely applauded than one who takes a broad statesmanlike view of the demands of the Nation and votes against pork barrel bills. Members do not vote for these measures from any evil desire to embarrass the Treasury. It is rather a question of political expediency with them. We must expect our annual appropriation bills to increase in their extravagance and our Government to become more and more costly so long as these measures are framed chiefly to promote the fortunes of political parties and individuals.

THE NEED FOR AN UNFETTERED CONGRESS

When once the people of the cities, counties, and states will think broadly along comprehensive lines, this source of reproach for the official will disappear, and with it will disappear plundering legislation and the degradation of the legislator to the position of a mere solicitor for his district. And yet I believe that, when you reach the real American citizen, he is not going to judge a Senator of the United States by the part that he plays in getting something out of the national grab bag.

Meanwhile we should change the methods which govern this system of appropriations — so that self-respecting members will not be forced to beg for

"pork" — and so that others will be prevented from doing so. One method suggested is by a constitutional amendment giving the President the authority to veto separate items of appropriation bills. Indefensible items of these pork barrel bills could be eliminated by the Executive pen. This would relieve the President of the embarrassment of being forced to sign bills containing indefensible items without endangering other items carrying absolutely necessary appropriations.

There are two other possible methods of driving pork barrel legislation from the halls of Congress. This evil thrives upon omnibus measures in which indefensible items are grouped according to the apparent necessities of the roll-call and leavened with occasional projects of commanding merit. Every new project should be presented and voted upon in Congress as a separate bill. Members of Congress would thus be relieved of the necessity of supporting bills containing improper items to be free to enact necessary legislation.

TEACHING THE PEOPLE PUBLIC MORALS

But the most effective weapon is public sentiment, which can be awakened to the evils of the present system only by a persistent campaign of education. People must be brought to realize that they are being taxed to pay the extravagant bills foisted upon the Government by this class of legislation. Public buildings, river improvements, free seeds, departmental publications, are being used to reëlect members to Congress. Bluntly, the people are furnishing the money by which they are being delivered. The people must be aroused to an indignation against the members who seek to promote their political fortunes at the expense of the Federal treasury. Let members, who boast of their prowess in securing millions of dollars from Congress for their home districts, realize that the public does not approve their course and will mark them for defeat — thus the evil will be driven from the Capitol.

It is a strange phase of the psychological moods of the American people that, while individual graft by an official, or other person, meets with prompt and just condemnation, graft, or something very similar to it, accomplished by appropriation from the Federal treasury, for the benefit of local communities, brings only wide approval.

Meantime, the public must be aroused to a feeling of resentment against this spoils system of legislation. They pay the bills — indirectly, it is true, but still they pay them. If they were to receive, semi-annually, tax bills for the expenses of the National Government, as they do for the local governments, I am certain that popular indignation would soon be provoked and the evil would be driven out of our legislative halls.

THE BACTERIA OF BAD BUSINESS

THE MATTER WITH THE MILKMAN — A STUDY OF ROCHESTER'S MILK SUPPLY

BY

DR. JOHN R. WILLIAMS

THE fundamental reason that impure milk is sold in American cities is an economic reason and not a sanitary reason. Under the present conditions of production and marketing, most dairy farmers and milk dealers simply cannot afford to make and sell milk that is safe to drink.

I make these statements upon the authority of a searching investigation of the milk industry in and about the typical American city of Rochester, N. Y. I had previously learned, what is notorious among students of this industry, that the quality of the milk that is sold in American cities has not materially improved in the last twelve years. The health bureaus have

unceasingly waged aggressive educational campaigns for pure milk, and the cities have vigilantly inspected the milk supply and have punished those dealers who have fallen below the requirements of stringent sanitary ordinances. And still most of the milk that is sold is of a quality that makes its use a standing menace to the health of the community.

The failure of these faithful and universal efforts led me to undertake an investigation of the problem along new lines in Rochester. I assumed that this failure indicated that other causes than sheer carelessness or the wilful neglect of milk producers and milk dealers must be sought to explain the lack of improvement in quality. For example, if the marketing of milk in a pure and cleanly condition involves the expenditure of prohibitive sums of money, or if the present methods of production and distribution are wasteful or inefficient, it would be clear that the true cause was economic and not merely sanitary. In brief, it might be found that the producers and marketers of milk could not afford, as a business proposition, under existing conditions, to make and sell milk as good as the laws require.

The information that was gathered in my investigations was tabulated and was interpreted in the light of personal observations. Two inevitable conclusions arose clearly from the mass of detail:

1. *That the fundamental cause of impure milk on the farms is the uneconomic method of production.*

This cause is apparent typically in two classes of producers:

(*a*) Those who conduct dairy farms on suburban lands which are held on speculation for the rise in price that will come from the certain growth of the city toward them, and which are already so valuable that the dairymen cannot earn interest on their value by legitimate methods of producing milk; and

(*b*) Those who through ignorance do not manage their farms skilfully enough in the feeding and care of their cows to make the business profitable enough to be able to afford the proper care in the handling of the milk.

2. *That the fundamental cause of impure milk in the city is the uneconomic method of distribution.*

The most striking evidence of this cause is that altogether too many dealers are engaged in distributing milk, with the results that twice as much money and twice as many men and horses and wagons as are necessary are employed to perform this service. Of course, these facts mean that the dealers get less than a fair profit and cannot, therefore, be overly nice in the care of the quality of their product. And they mean, too, that the consumers pay more than a fair price for milk — of an inferior grade.

The fuller details of these investigations appear in the following pages and in the photographs which illustrate them.

To test my theory, I made an exhaustive study of ten typical dairy farms near Rochester and of the operations of 173 milk distributors in the city itself. At every farm I learned the number of acres under the dairyman's control, the number of acres devoted to dairying, the value of the land per acre, the number of cows, the amount of milk they produced yearly, the total yearly cost of its production, the labor profit or loss by the year, and the official record of the bacteria count of the milk for two years. Besides these statistics, I made a personal survey, taking photographs for verification, of the appearance and arrangement of the farms and of distinguishing peculiarities of their management.

In Rochester, the statistics and observations were even more searching. The dealers were questioned as to the amounts and kinds of milk sold, the number of men and horses and wagons employed, the length of their routes, the number of their customers, the value of their real estate and equipment, their bills for coal and ice, maintenance and labor costs, the cost of bottles, the cost of the milk to them and the proportion of this cost that the producer received, their receipts from customers, and their profits or losses on labor account. And the official record of the quality of milk supplied by every dealer for two years was obtained.

For example, I found that, in a section

in which most of the inhabitants were Negroes, 23 distributors were traveling 20 miles daily to supply 165 homes which could be supplied by one distributor traveling only two miles. On an average, in each of four sections of American workingmen, 47 distributors were traveling 38 miles to 431 homes, in every case a waste of more than 40 men's work and of 25 miles of travel. In each of four districts of foreign workingmen, 49 distributors were traveling 37 miles to serve 317 homes which one dealer could supply in 2½ miles of travel. Twenty-six distributors were traveling 48 miles to supply 443 homes of middle-class Americans, though one man could have performed the same service by traveling 2½ miles. In each of five sections of well-to-do homes, 23 distributors were traveling 22 miles to perform a single distributor's service of traveling a little more than 2 miles to 173 homes.

The investigation was carried on into the homes of their customers, and was methodically pursued among fifteen classes of consumers, selected with reference to their earning capacity, their nationality, and their general type of occupations. Thus the kind and quantity of milk used by more than five thousand families (5,436, to be exact) of every class was ascertained; whether certified milk, store milk, or condensed milk was used, and whether or not ice was used to preserve it.

In these investigations, I found that, in one section, peopled chiefly by colored folk 1,128 people in 231 homes used 245 quarts of milk daily, and in 91 of these homes no ice was used; in four sections of American workingmen, 5,226 people in 1,962 homes used 2,272 quarts daily, and 1,049 homes used no ice; in four similar sections of foreign laborers, 9,480 people in 1,881 homes, used 1,927 quarts a day, and less than half the homes (972) used ice; in a section of American middle-class homes, 1,939 people in 450 homes used 533 quarts daily, and 149 homes used no ice; 3,925 people, in 912 homes in five sections of well-to-do people, used 1,412 quarts a day, and only 45 homes were without ice.

In the suburbs of Rochester, as in the suburbs of most cities, are a considerable number of dairy farms. As a rule the poorest milk comes from these places. The land that is here used for dairying is often worth as much as $1,200 an acre. It is obvious that the "overhead charge" on these places is so great that the business cannot be conducted properly and profitably. Such land, because of its nearness to the city, is usually being held for residential purposes and the owner is rarely willing to erect and maintain buildings and equipment for dairying. Indeed, for this reason, the most insanitary cow barns and the poorest equipment are found on these places. The community, by its present plan of taxing land according to the value of the improvements that are on it, not only encourages but actually puts a premium on disorder and neglect. Hence, the keeping of cows on valuable suburban property may be, and often is, a subterfuge for evading just taxation.

On other suburban farms the milk business is conducted in conjunction with fruit culture and truck gardening. The cattle are maintained chiefly for the fertilizer they afford. In these instances the dairying is by far the least profitable and accordingly suffers the most neglect. Gross evidences of neglect and inefficiency appear, which affect not only the cost but the quality of milk production. Oftentimes a farmer owns only two or three cows, and sells their milk to a neighboring dealer. These small producers rarely have any equipment for dairying, and hence the danger of contamination and disease is not only greatly multiplied but the evil is infinitely more difficult to control.

On one dairy farm the owner is attempting to make milk on land which very shortly will be used for building lots. This property is worth at least $1,000 an acre. It is costing the owner nearly six cents a quart to produce milk. He thus loses approximately two cents on every quart he sells, because he could purchase milk from farmers in the country districts for four cents a quart. Hence his annual loss on milk production, including his own labor, is $710. This farmer distributes the milk at seven and a fraction cents a quart and makes only a precarious living.

His buildings and equipment, as would

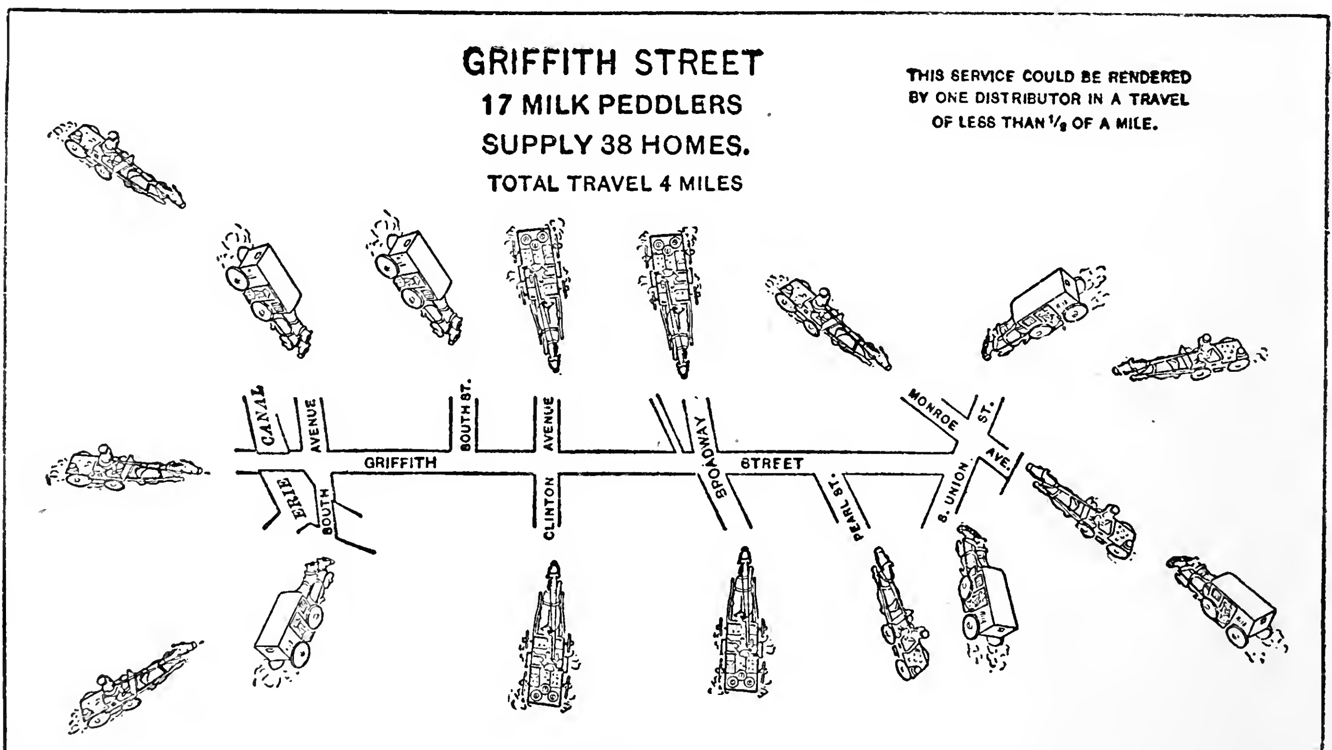
be expected, are very crude and insanitary. He cannot afford, on this valuable land, to build and maintain a suitable dairy plant. The unhygienic character of his outfit is strikingly indicated by the quality of the milk which he produces. For the last two years the average bacterial count of his milk has been 471,000 germs per cubic centimetre, notwithstanding that he is able to distribute it twenty-four hours fresher than most dealers, who get their supply by railroad. A bacterial count of more than 100,000 germs per cubic centimetre is considered bad, and is evidence of unclean methods or of dirty milk.

The ordinary farm land of western New York, in distinction from suburban property, ranges in value from $50 to $200 an acre, depending on the nature of the soil and its nearness to a market. The average cost of milk production on these farms is about three and four tenths cents a quart. The price received for the milk laid down in Rochester varies from three and one half to four cents a quart.

In the country districts, many farmers are holding more land than they can properly work. Many farmers own from 200 to 1,200 acres, of which not more than one third is cultivated, usually because it is difficult to get labor. At least 20 per cent. of the tillable land in the Genesee Valley is used for grazing, although it has been shown repeatedly that cropping on fertile land is a much more economical method of feeding than pasturing. The more progressive farmers are those who grow their food materials. For example, on one of the farms studied it was decided to plant fodder corn on a portion of a 50-acre pasture lot, which before that time would barely maintain the dairy herd for more than a few weeks. The first crop yielded 200 tons, or enough food to maintain the herd for nearly a year.

Almost without exception the progressive dairymen who cultivate their tillable land have superior buildings and equipment. The majority of milk farmers, however, besides pasturing excessively, are very neglectful of their buildings and of their tools. The value of paint as a preservative apparently is little appreciated. As a rule the cows are kept in the least desirable parts of the barn, usually in quarters unsuited for any other purpose. The dry, light, and well ventilated portions of the building are reserved for the hay and grain and for the farm vehicles, and the cows are quartered in dark, deep, stuffy basements.

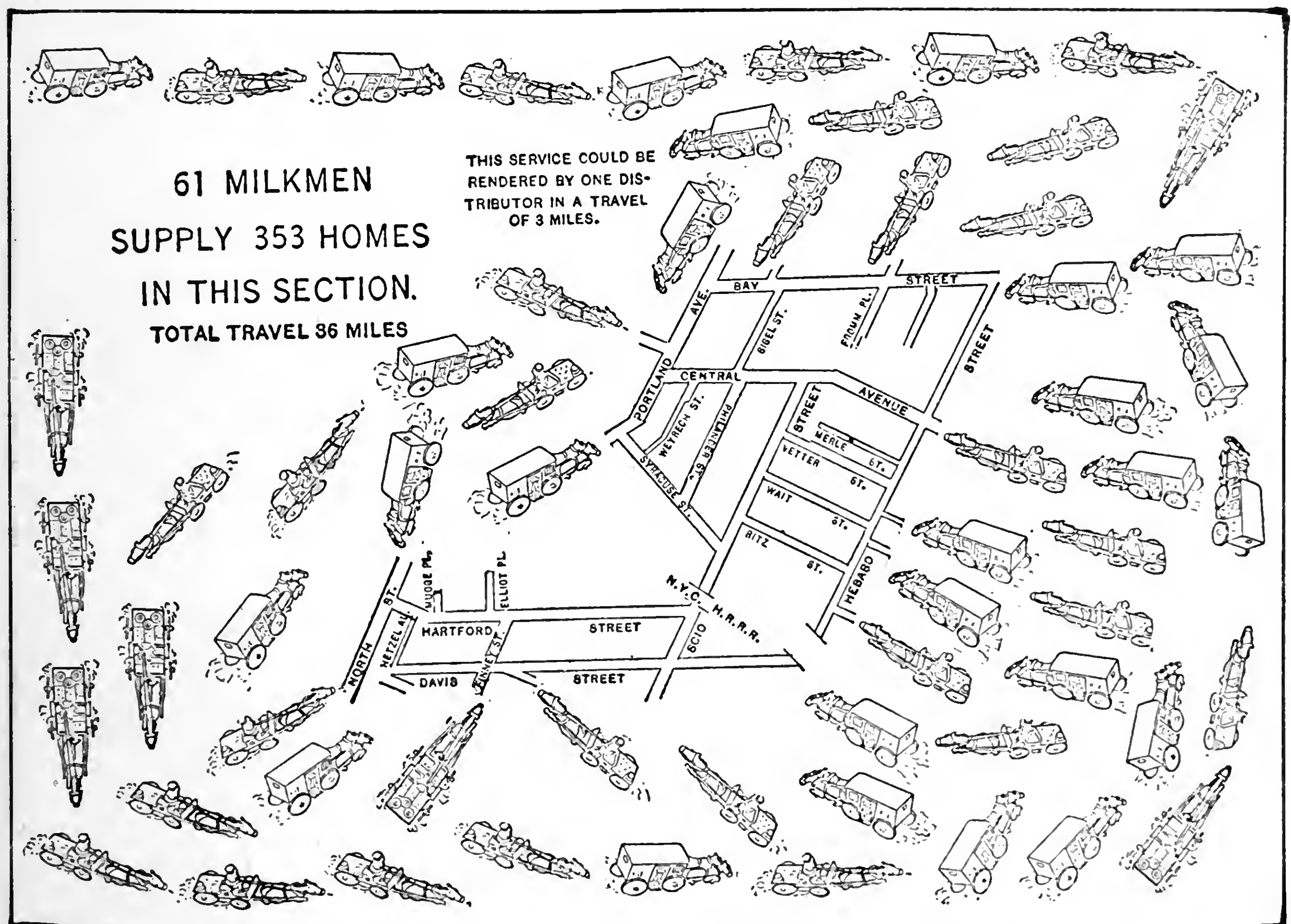
This unhygienic treatment of the cows



AN ECONOMIC WASTE IN THE DISTRIBUTION OF MILK IN ROCHESTER, N. Y.

has an economic significance of vast importance. It is directly reflected in the prevalence of tuberculosis among the dairy herds. The raising of good strong types of milch cows is likewise grossly neglected. Occasionally a producer was found who was engaged in the breeding of high grade registered stock, but the average dairyman is content, for the most part, to propagate any kind of scrub cattle. This is particularly true of small farmers. The result is that on many farms are to be found cows which do not give enough milk to pay for the food they consume. Many other evidences of wasteful methods were noted on these places, such as the lack of appreciation of the value of manure and the indifferent methods of its disposal. One student of the problem declares that during the warm season flies eat and carry off about one fourth (by weight) of the manure. The common practice is to deposit manure in the place most accessible from the cow stable, generally just outside the barn door, where the valuable or liquid portions are allowed to soak into the ground and are lost.

The usual type of milk house is a small, inexpensive structure adjoining the barn. These little buildings, as a rule, contain no other apparatus than a small wash board device for aerating and a large cooling box in which the milk is stored. Very few farms are equipped with steam boilers or have adequate facilities for washing or sterilizing utensils. Many producers depend upon the dealer in the city to cleanse the cans and very few city dealers have proper equipment to do this.



WASTED EFFORT IN DISTRIBUTING MILK IN A POPULOUS CITY DISTRICT

Of great importance is the conservatism of most farmers in applying new and efficient methods to their dairy practice. It is an exceptional dairyman who concerns himself with the profit-yielding capacity of his herd, or with the problems of cattle hygiene, of sanitary farm building construction, of economic manure disposal, or of soil cropping.

Nevertheless, it is to be doubted if the cost of high grade market milk production

can be reduced. Though it is obvious to the student of economics that many of the methods are wasteful and inefficient, it is also true that the farmer is not adequately compensated for his service.

Improvement in market milk production will come with the adoption of intensive farming, with intelligent breeding and care of cattle, with the introduction of modern methods in the dairy, and with active coöperation with the selling agencies in the city. Under such a plan milk, of high degree of purity and free from all disease contamination, should be made profitable for but little more than it now costs to produce the present variable and commonly dirty milk. Receiving stations, under the control of the city, should be established in the principal dairy communities. These should coöperate with the producers in the country and with the distributing agencies in the city. To these stations every dairyman should bring his milk to be examined and to be paid for on the basis of cleanliness and butter fat content. Here the milk could be graded and prepared for market. Pasteurization, when needed, could be properly done. Excesses in supply could be economically made into butter and other milk products. Vigilant supervision and inspection of an entire municipal supply could be maintained at nominal cost. The present method of milk inspection of American cities is inadequate and from its nature it must ever be so.

This plan of controlling production is employed by the New York Milk Demonstrating Company, of Homer, N. Y. The essential details of it were originated by Dr. Charles E. North, of the National Milk Committee.

Number of distributors		173
Quarts of milk sold daily		63,314
Number of men employed		356
Number of horses employed		360
Number of wagons employed		305
Length of routes in miles		2,509
Number of customers		35,090
Value of milk room equipment	$76,902	
Value of horses and wagons	107,450	
Value of real estate	96,700	
Total investment		$281,052
Interest and depreciation	$110.65	
Cost of coal and ice	107.40	
Milk shrinkage, waste, etc.	84.04	
Maintenance of horses and wagons	378.80	
Daily wages of labor	321.81	
Cost of bottles	180.63	
Total cost of distribution		$1,183.33
Amount paid to producers		2,895.10
Total cost to distributors		$4,078.43
Total receipts of distributors		$4,876.96
Labor profit		79.42
Labor loss		3.96

AN ECONOMIC ANALYSIS OF THE BUSINESS OF DISTRIBUTING MILK IN ROCHESTER, N. Y.

After these conclusions were reached from the studies that were made in the country, attention was turned to the problem in the city.

Rochester has a population of about 225,000. Supplying these inhabitants are more than 200 milk dealers or companies. With the exception of three moderate-sized concerns, the distributors are all small dealers. Much of the milk sold receives the condemnation of

the health bureau and may be considered insanitary. At the time the inquiry was begun, 185 dealers were engaged in the distribution of milk. During the last three years there were about 75 changes in the ownership of the various businesses: that is to say, old dealers gave up the work or new ones entered it. This fairly indicates the transient and unprofitable character of the industry.

A SANITARY MILK HOUSE

SUCH A BUILDING (CLEAN, SCREENED, AND WELL-KEPT) IS FOUND ONLY ON FARMS WHOSE OWNERS ARE EFFICIENT MANAGERS OF THEIR STOCK AND LAND AND BUILDINGS AS A BUSINESS ENTERPRISE

In this study of distribution a detailed examination was made of the business of every dealer, and this examination was supplemented by a study of the use of milk in 5,400 homes. The city was divided into sections, representing the different social and economic classes, and from 100 to 700 homes in each district were visited. Much interesting and important information was thus secured. The poorer classes, as would be expected, use less milk than their more fortunate neighbors. The use of condensed and other proprietary milks, of store milk and loose milk, is confined almost entirely to the laboring classes. The explanation of this was found to be that comparatively few of these people have ice boxes or take

AN ORDINARY MILK HOUSE AND BARN

POORLY EQUIPPED, UNPAINTED DAIRY BUILDINGS, COMMON ON FARMS ON WHICH MANURE DISPOSAL AND CATTLE BREEDING ARE NEGLECTED. THE UNECONOMIC BASIS OF THE DAIRY BUSINESS PUTS A PREMIUM UPON SUCH INSANITARY METHODS AS HANDLING THE CANS IN FLY-INFESTED YARD

DAIRYING ON LAND THAT IS TOO VALUABLE FOR THAT PURPOSE

ANOTHER EXAMPLE OF THE UNECONOMIC METHODS THAT ARE NOW USED IN THE PRODUCTION OF MILK AND THAT TEND TO MAKE THE PRICE HIGH AND THE QUALITY LOW. A MILK FARM ADJOINING A FINE RESIDENCE SECTION, KEPT AS PASTURE TO LESSEN TAXES AND TO AWAIT A RISE IN VALUE

ice and most of them, therefore, have no means of preserving perishable foods. They buy their milk from the grocer as it is needed, or use condensed or evaporated milks which do not require ice protection.

One of the most striking facts observed was that large numbers of milkmen go into every district. For example, in one section inhabited by German and Jewish working people, 57 distributors were supplying 363 homes. These 57 peddlers travel 30 miles in running to and fro in

CHARACTERISTIC BUILDINGS ON A SUBURBAN DAIRY FARM

THE PRESENT METHOD OF TAXING LAND MAKES IT UNPROFITABLE FOR THE OWNER OF SUCH A FARM TO MAINTAIN SANITARY BUILDINGS AND DAIRY EQUIPMENT

this section, although the same service could easily be rendered by one dealer who would need to travel less than 2 miles. In the Italian section, 61 distributors were traveling 36 miles to supply 353 homes, although the same service could be rendered by one agency in a travel of not more than 3 miles.

This great waste of energy and useless traffic is just as great in sections occupied by the well-to-do. In one such better

HOW THE COWS ARE HOUSED

ON MOST DAIRY FARMS, IN THE WORST PART OF THE BARN. THE COW IS A FRESH AIR ANIMAL AND NOT VERY RESISTANT TO DISEASE. STABLES LIKE THESE ARE UNECONOMIC BECAUSE THEY LOWER THE VITALITY OF THE HERD AND PROMOTE THE SPREAD OF TUBERCULOSIS

district, 27 milk peddlers were supplying 278 homes. These dealers travel 24 miles daily, although the total length of streets is less than 2 miles. On many streets a different dealer serves every two homes, and oftentimes several dealers go to one home. In one instance, nine dealers were found each delivering one pint of milk to one small house.

Most of the retail milk business is carried on by small dealers who sell from 100 to 1,000 quarts daily. A few concerns do more than this, but even they are small companies. Very few dealers keep records which would enable them to determine the expense of the various elements that enter into the cost of distribution. Some of them keep no records. Accordingly, in this investigation, much of the data is approximative and is based on diligent inquiry and careful comparative study. These difficulties are illustrated in the trouble of computing the cost of coal for heating the water that is needed to wash the cans and bottles. Many

CRUDE EQUIPMENT IN SUBURBAN DAIRIES

A BOTTLE FILLER CONSISTING OF AN OLD CAN FROM WHICH THE MILK IS DRAWN THROUGH A PIECE OF HOSE THAT CANNOT BE STERILIZED, A DEVICE THAT IS AS INSANITARY AS THE OLD STYLE OF BABIES' FEEDING BOTTLES

dealers use the kitchen stove for this purpose and have no knowledge of the amount or cost of the fuel used.

For the purpose of study and comparison, the distributors were divided into four groups according to the amount of business they do. The first group is composed of dealers selling less than 150 quarts daily. Of these there are 25. The second group consists of 101 distributors who sell from 151 to 300 quarts daily. The third group is made up of 44 dealers distributing from 301 to 1,000 quarts. In the fourth group are the three com-

panies of the city who dispense from 3,000 to 8,000 quarts apiece. The first three groups may be classed as small dealers. Many of them are men who have worked unsuccessfully at other occupations and have gone into the milk business on the assumption that it is an easy way to earn a living. A few of them operate small farms in the suburbs, and for these the milk business is a side issue. Occasionally one of them works at a trade and takes care of the milk work outside the hours of regular employment. Many of them begin business by buying an old horse and a second-hand wagon, and these they often pay for on the instalment plan. The usual type of milk wagon is a small, four-wheeled vehicle, with or without top, divided in the centre by a seat and with a carrying capacity of between 100 and 200 quarts.

Usually they partition off a portion of the barn and use it as a milk room. Others build a shed-like wing, usually made of second hand lumber, attached to the house. Only a few of the more successful small dealers have built separate milk houses of very good construction. The milk room is generally made no larger than is necessary for the actual bottling and handling of the milk. Rarely is room provided for storing or drying clean cans. The common practice is to set them out in the yard or street where they are exposed to dust and dirt. The equipment is generally most meagre, and with the smallest dealers consists only of an ice box and a small stove. Some, however, have not even the stove, but get their supply of hot water from the kitchen. Indeed, where milk houses are in barns, fire insurance underwriters oppose the use of heating apparatus.

THE MOST EXPENSIVE WAY TO DELIVER MILK

FIVE TIMES AS MUCH MILK CAN BE DELIVERED IN THE SAME TIME AND AT THE SAME COST BY USING A 2-HORSE TRUCK AND THREE MEN FOR HOUSE-TO-HOUSE DISTRIBUTION

The sterilization of milk bottles and cans in the majority of milk houses is therefore impossible, and an avenue of disease contamination is thereby established. More thought is given to making the ice box water-tight than to the principles of insulation or refrigeration. Accordingly, they are often most uneconomical in their consumption of ice.

Many of the better dealers have hot water plants and bottle fillers. A very few of them have other appliances such as the large companies have for the proper utilization of milk excesses and waste.

In the duplication and reduplication of equipment of these places is an unnecessary investment of thousands of dollars.

At the time this study was made, 170 dealers were selling less than 1,000 quarts daily or a total of about 47,000 quarts, most of them averaging less than 400 quarts. They had invested, in crude ice boxes, bottle fillers, stoves, cans, etc., more than $37,000. For a much less sum, one modern sanitary plant of sufficient capacity to do this business could be equipped with the best apparatus. A like duplication of equipment is seen in the three large companies which have thus invested more than $38,000, although the equipment of any one of them is ample to do the business of all three.

WHERE THE MILK IS SOLD

AS A SIDE ISSUE IN GROCERY AND OTHER SMALL STORES. THE AVERAGE BACTERIA COUNT OF THE MILK SOLD IN SUCH PLACES IS MORE THAN 1,000,000 PER CUBIC CENTIMETRE. A COUNT OF MORE THAN 100,000 INDICATES BAD MILK

Like extravagances were found in the use of horses and wagons. The 170 small dealers now use 295 horses and 255 wagons. These represent an investment of $82,400. The same service could be rendered by one agency, with 40 horses,

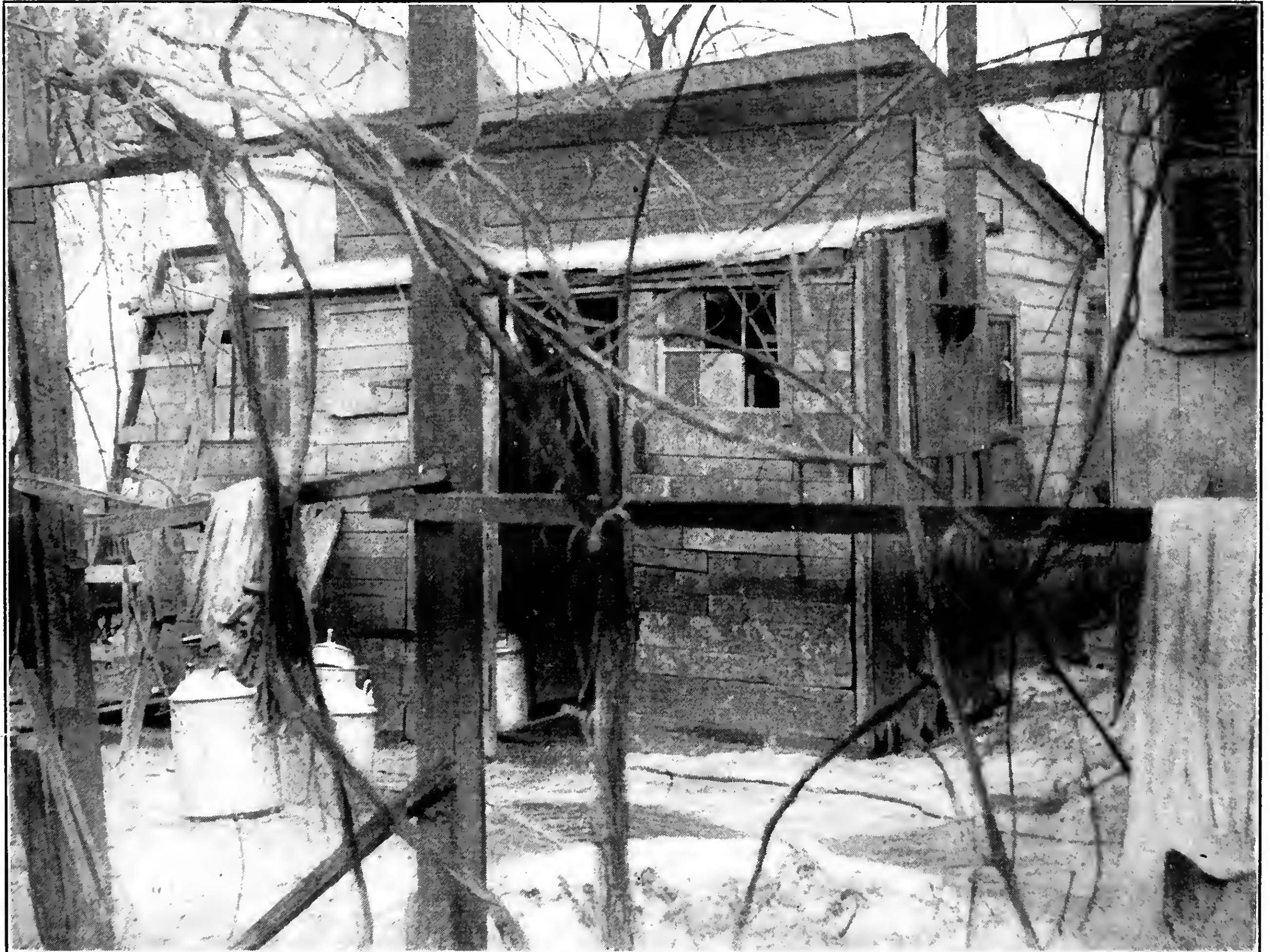
THE HOME OF A SMALL DEALER

TEN GROWN PEOPLE AND SEVEN LITTLE CHILDREN LIVE IN THIS 4-ROOM COTTAGE. THE MILK ROOM IS IN THE REAR OF THE CELLAR. THE AVERAGE BACTERIA COUNT OF THE MILK SOLD FROM THIS PLACE IN 1911 WAS 2,284,000 PER CUBIC CENTIMETRE

16 trucks, and 2 motor trucks, costing approximately $20,000, a possible saving of at least $62,000 a year.

The three large companies, selling more than 1,000 quarts daily, now employ 65 horses and 50 wagons that cost about $25,000. Under proper and efficient methods of distribution their work could be done by 12 horses, 4 trucks, and 1 motor truck, which would afford a saving in investment of about $18,000.

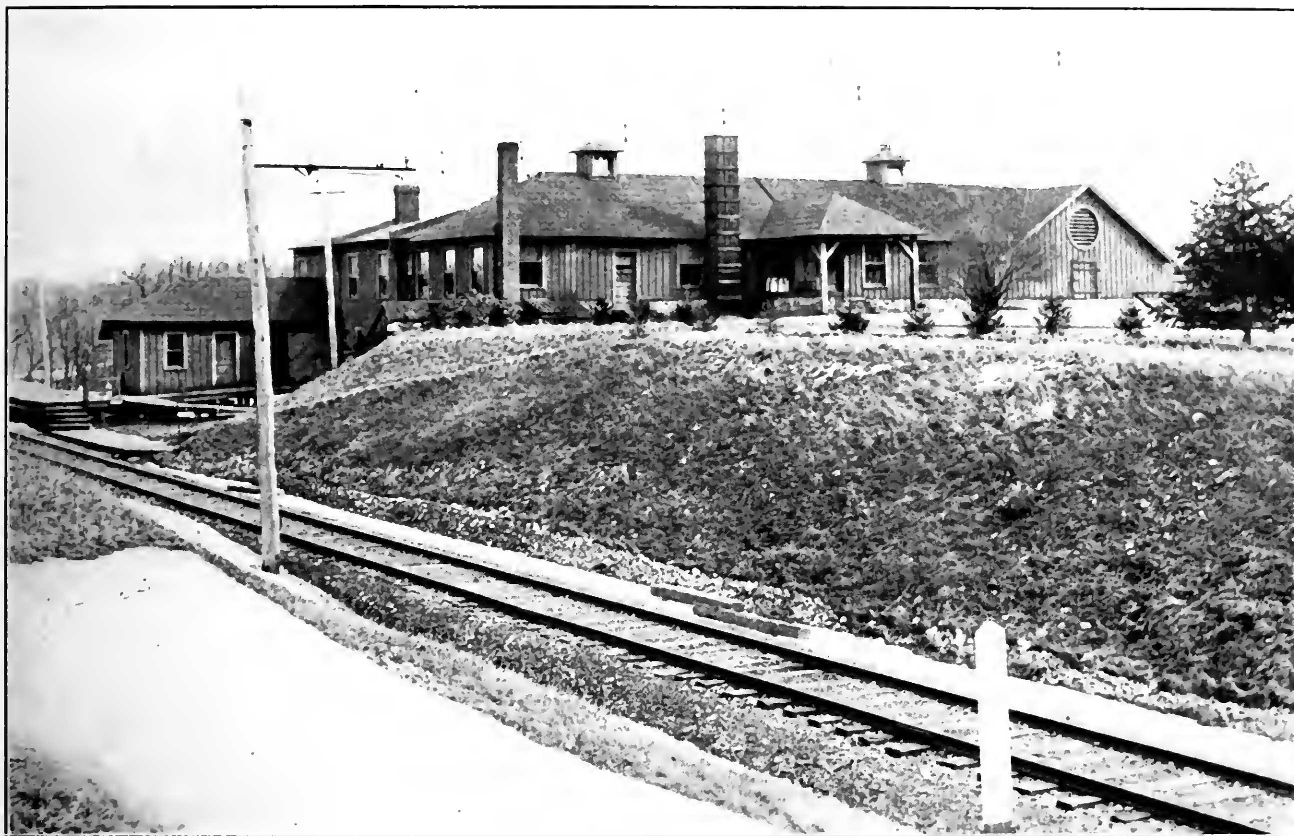
To test the accuracy of these conclusions, a direct experiment in distribution was made. The average retail delivery wagon, requiring the services of one man and one horse, distributes daily about 175 quarts of milk. By actual test, it was demonstrated that milk can be delivered most economically and most efficiently by using a large two-horse truck carrying 1,000 quarts of milk, manned by a driver and two assistants, and by making a house-to-house distribution. The following important fact was established by this experiment: In the poorer and crowded sections of the city, notwithstanding that small amounts of milk are used, milk could be delivered at the rate of 400 quarts per hour, and in the well-to-do districts, where houses are farther apart, but where more milk is used, it could be distributed at the rate of 500 quarts an hour. Thus, in a working day of eight hours, three men and one two-horse truck, under conditions favoring efficiency, could deliver between 3,000 and 4,000 quarts of milk.



THE MILK HOUSE OF A SMALL DEALER

THE AVERAGE BACTERIA COUNT OF THE MILK DISTRIBUTED FROM THIS HOUSE IN 1911 WAS 2,090,000 PER CUBIC CENTIMETRE

Under such a system it would be desirable to have a large motor truck to replenish the delivery trucks on their routes. At present, approximately 15 men and 15 horses and wagons are required to render this amount of service. A single efficient agency should be able to distribute this amount of milk for not more than $15 a day. It now costs at least $50 a day.



THE MODEL RECEIVING CREAMERY OF A PRIVATE COMPANY

AT AVON, N. Y. FIVE PLANTS LIKE THIS COULD RECEIVE AND PREPARE FOR MARKET ALL THE MILK THAT IS USED IN ROCHESTER. THE CANS AND PAILS THAT ARE USED BY THE PRODUCERS COULD BE STERILIZED AND MUCH EXPENSIVE APPARATUS ON SEVERAL HUNDRED FARMS WOULD BE MADE UNNECESSARY. SUCH PLANTS WOULD REDUCE THE COST OF PRODUCTION BESIDES RAISING THE QUALITY OF MILK

This difference of $35 is the price that is now paid by the consumer for the needless efforts and the wasted energies of a large number of peddlers who supply a dozen city blocks. It represents sheer loss, because milk distribution under the present absurd competitive system benefits no one, not even the dealer.

An examination of the accounting of various groups of dealers, as exhibited in Table No. 4, shows conclusively that most of the distributors make only a very meagre living. In many cases their income is much less than the income of day laborers and unskilled mechanics. This fact, considered with the fluctuations in trade and the losses which commonly occur, makes the business most precarious. For these reasons the less responsible dealers are tempted to recoup their losses by resorting to various illicit practices, most common of which are bottle stealing, adulterating milk, and selling old milk.

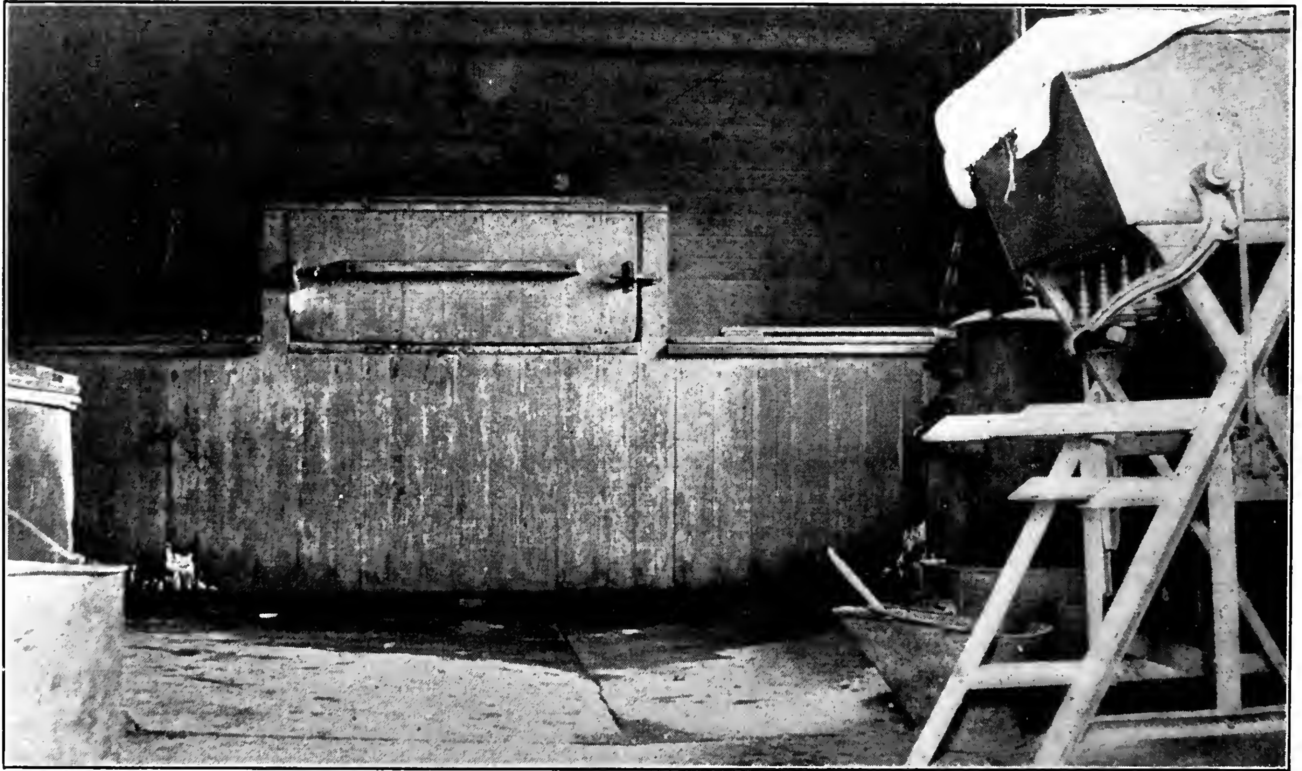
While much of the milk sold by the small dealers in the poorer sections is dipped from cans, practically all of them use some bottles. Probably the average milk bottle makes from twelve to fifteen trips to the consumer and then is either lost, broken, or stolen. The small dealers, particularly, are guilty of appropriating the bottles of their larger competitors. In the examination of the bottles being used by one reputable dealer, fourteen out of twenty-four were found to belong to other distributors. In the crates of an other dealer seventeen out of twenty-four bore the names of other distributors. Many families take from more than one milkman, and it is not uncommon for the first peddler on the ground to take the bottles of the others. This custom has developed a spirit of carelessness in the handling of bottles with the result that thousands of them yearly are needlessly broken or thrown away.

In the yards of most dealers are barrels of broken bottles, representing many dollars' loss. On the premises of one small distributor five large barrels were found, all full of broken glass, representing at least 1,000 bottles, most of them

belonging to other dealers. They cost their original purchaser at least $55.

However, the consumers must be charged with a large part of this unnecessary loss. Every year thousands of milk bottles are used in homes and shops to store food and for other purposes. Thousands of bottles are thrown away into ash and rubbish cans and are thus broken or lost. Recently the city has established a plant for the sorting of rubbish. During the last six months 3,000 good milk bottles have here been rescued, but at least as many more were broken and destroyed. The average price paid for a milk bottle is five and one half cents. The loss from theft and carelessness in Rochester is at least $10,000 a year. This is a tax which adds to the cost of milk to the consumer.

It is possible to estimate with reasonable accuracy the principal losses that are occasioned by the use of the present system of distribution and to determine the saving that could be effected were proper and efficient methods employed. This is clearly set forth in the subjoined comparative tabulation, in which account is taken of the rent or real estate value. It is obvious, however, that a saving could be effected in these costs were the business of all the dealers conducted on one property. These estimates allow liberally for amortization, interest, and superin-



WASTEFUL INVESTMENT IN CITY MILK HOUSE EQUIPMENT

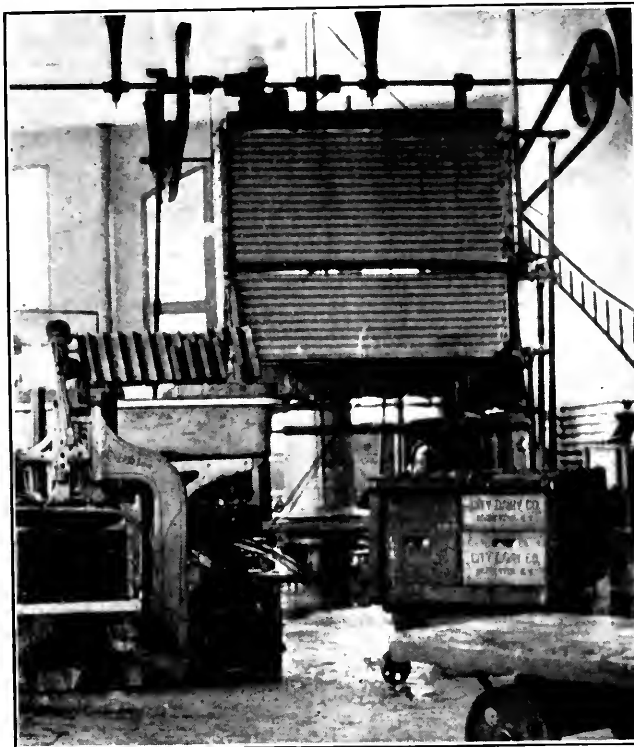
FAR MORE MONEY IS INVESTED IN NEEDLESSLY DUPLICATED PLANTS OF THIS CRUDE AND MEAGRE TYPE THAN WOULD BE NECESSARY TO EQUIP ONE MODEL PLANT THAT COULD SUPPLY THE WHOLE CITY

THE COST OF DISTRIBUTING MILK IN ROCHESTER

Under the Present System	*Under a Model System*
356 men and in many cases their families	90 men
380 horses	80 horses
305 wagons	25 horse-drawn trucks
2,509 miles of travel	300 miles of travel
$76,600 invested in milk room equipment	$40,000 equipment for one sanitary plant
$108,000 invested in horses and wagons	$30,750 equipment of horses and trucks
$2,000 present daily cost of distribution	$600 estimated daily cost of distribution
$720,000 yearly cost of distribution.	$220,000 estimated yearly cost of distribution

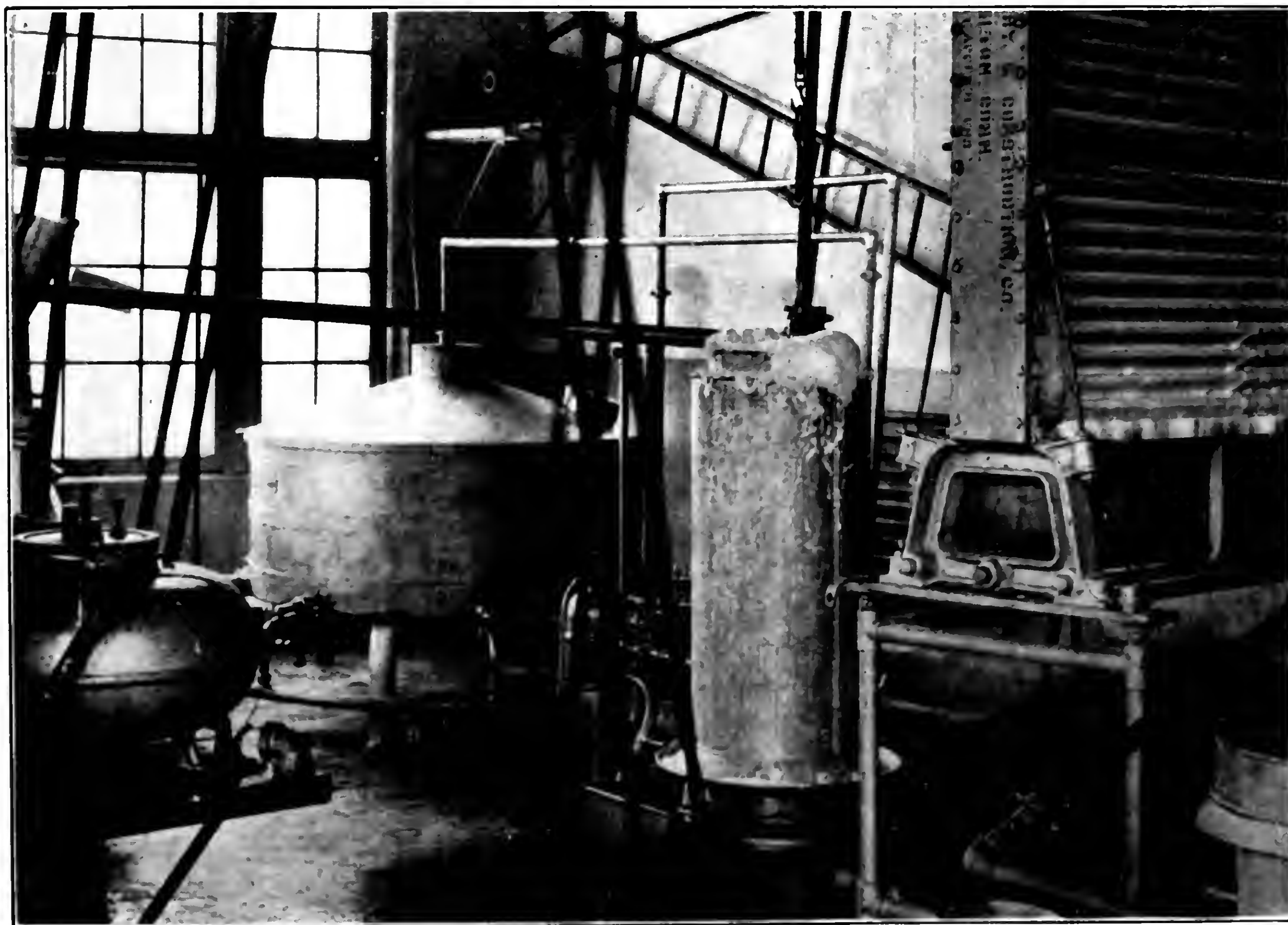
tendence, and they are made with conservative judgment. There is little question that if the milk supply of Rochester were to be distributed by one agency properly organized and equipped, a saving to consumers of at least $500,000 yearly could be effected.

The results of this study clearly indicate that the present system of milk distribution, such as is found in Rochester and most American cities, is very wasteful and is responsible for much of the bad milk that is sold. At present, municipalities are attempting to protect the public milk supplies by exercising their police power in endeavoring to maintain certain standards of purity. With the exception of a few large cities, the milk business is in the hands of many small dealers who have no training or fitness for the occupation. Though the prevailing system of espionage of health bureaus occasionally detects and represses vendors



MODEL MILK ROOM EQUIPMENT

DUPLICATION OF PLANTS MAKES IT MORE PROFITABLE FOR THE DEALER TO MAINTAIN MACHINERY LIKE THAT WHICH IS ILLUSTRATED ON THE PRECEDING PAGE, AND ADDS TO THE MENACE OF AN IMPURE MILK SUPPLY



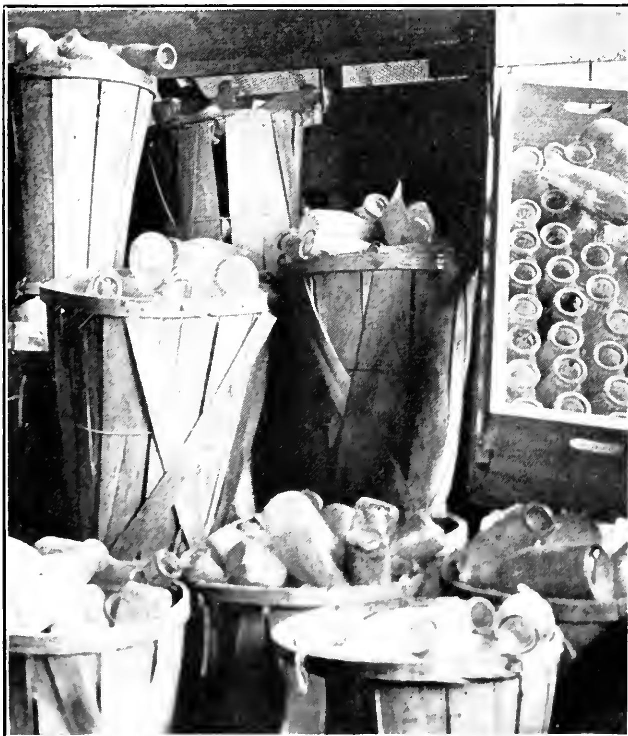
A SANITARY MILK PLANT

UNECONOMIC, HOWEVER, FOR IT CANNOT BE UTILIZED TO FULL CAPACITY BECAUSE TWO OTHER PLANTS IN ROCHESTER HAVE THE SAME EQUIPMENT AND ANY ONE OF THEM COULD DO THE WORK OF ALL THREE

WASTED MILK BOTTLES

BARRELS OF BOTTLES BROKEN THROUGH SHEER CARELESSNESS IN HANDLING. PART OF ROCHESTER'S $10,000 YEARLY LOSS THAT ADDS TO THE COST OF MILK

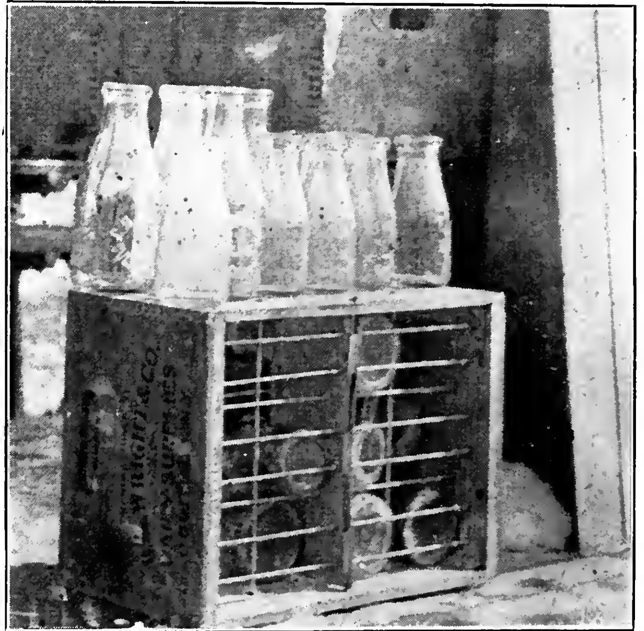
of impure milk, the system utterly fails to secure an unvarying, dependable supply. One inevitable conclusion from this study is that this extravagant method of distribution not only adds an unnecessary burden to the consumer but it also reacts upon the distributor, because it makes the business too unprofitable to be done well. It is to be doubted, therefore, that any further headway will be made in the municipal milk problem by legal mandate beyond the present conditions.



WHY MILK IS EXPENSIVE

ABOUT ONE THOUSAND BOTTLES A MONTH ARE SORTED FROM THE RUBBISH AT THE MUNICIPAL INCINERATING PLANT, A STRIKING PROOF OF THE CARELESSNESS OF HOUSEKEEPERS. MANY OF THESE BOTTLES ARE SOLD TO SMALL DEALERS WHO HAVE NO MEANS OF STERILIZING THEM

So universal is the use of milk that it may be regarded as a necessity of life. Its purity, therefore, has an important bearing on the public health. In this respect it may be compared to water. Municipalities have long since appreciated the necessity of preserving the integrity



CARELESS SORTING OF BOTTLES

A COMMON PRACTICE THAT IS EVIDENCE OF THE UNECONOMIC CONDITION OF MILK DISTRIBUTION, WHICH IS THE FUNDAMENTAL CAUSE OF HIGH PRICES AND POOR QUALITY. IN TWO OF THIS DEALER'S CRATES THE BOTTLES OF FOURTEEN OTHER DISTRIBUTORS WERE FOUND

of their water supplies even to the extent of owning them. They have, likewise, recognized the expedience of providing market places where the sale and exchange of less perishable foods may be facilitated in an economical and cleanly manner. All these activities bear an important relation to the public health, but none the less does milk. Why, therefore, should not cities control their own milk supplies so that the people may have pure, wholesome milk at a minimum cost?

The solution of the milk problem lies, therefore, in the better economic control of production and distribution.

TWO CITIES THAT TURNED FARMERS

DULUTH, GROWN BIG BY TAKING TOLL OF PASSING TRAFFIC TO THE GREAT LAKES, NOW MAKING POSSIBLE A LARGER GROWTH BY DEVELOPING AN AGRICULTURAL BACK COUNTRY — DELAVAN, WIS., DOING ITS DUTY TO ITS NEIGHBORING FARMS BY EXTENDING THE RADIUS OF INFLUENCE OF ITS CHURCHES, LIBRARY, HIGH SCHOOLS, AND STORES — WHAT A "RURAL SURVEY" CAN DO TO STIMULATE THE SOCIAL AND BUSINESS LIFE OF A FARMING COMMUNITY

BY

FRANK PARKER STOCKBRIDGE

"WHAT are you going to feed them on?"

The directors of the Duluth Commercial Club had been talking about "boosting" Duluth, getting new industries that would bring thousands of workmen and their families to the "Zenith City of the Unsalted Seas." They had expatiated upon the natural advantages of Duluth as a manufacturing centre, sitting at the western limit of navigation on the Great Lakes and at the easternmost terminal of the transcontinental railroads, unlimited iron and timber at their very doors — these things ought to appeal to the manufacturer looking for a new location. Then Major Hubert V. Eva, who is secretary of the Commercial Club, spoiled it all by asking:

"What are you going to feed them on?"

Most of the directors thought he was joking. He pointed out that in all of northeastern Minnesota, in the country tributary to Duluth, there were not enough foodstuffs produced to support a city population very much smaller than Duluth's 80,000. A little investigation convinced them that Duluth's markets were being supplied by St. Paul commission houses after the Twin Cities had taken their pick of the best.

So it came about that when I sat down at luncheon in the Club rooms last June my host, Mr. A. B. Hostetter, bore the title of "Superintendent of Agriculture of the Duluth Commercial Club." From table to table noticeably non-commercial conversation passed.

"How are your peas coming on, John?" called a prosperous-looking citizen to a friend at another table.

"Coming on fine, Harry. How's your corn?"

"Looking great. I'll bring some down for lunch as soon as it's big enough."

"Are your members all farmers?" I asked, as these and similar interchanges about the big room caught my ear. Mr. Hostetter laughed.

"In a way everybody in Duluth is a farmer," he said. "It just happens that

the gentleman in the corner is a millionaire iron man. The one who spoke of his corn made a fortune in lumber and retired some years ago. I suppose there are more millionaires in Duluth, in proportion to population, than in any other city. But if you want to get them really interested just begin to talk about farming. It's the farms in St. Louis County that are going to make Duluth the real metropolis of the Northwest."

A seven-mile sand bar, Minnesota Point, separates the harbor from Lake Superior. Behind it Duluth has the finest natural harbor on the Great Lakes. Forty-five years ago there was an Astor fur trading post up the river. Then lumbermen came and made millions cutting the timber. Then Jay Cooke built the Northern Pacific and picked Duluth as its eastern terminal. The lumbermen had built a village; the villagers took toll of the wheat that began to flow through from the Northwest over the new railroad for trans-shipment by the lake ships to the seaboard, and they built a city. Then, when the last of the timber was gone, somebody scraped the surface of the earth a few miles back of the city and found iron ore, and the city began to take on the airs of a metropolis.

MR. A. B. HOSTETTER

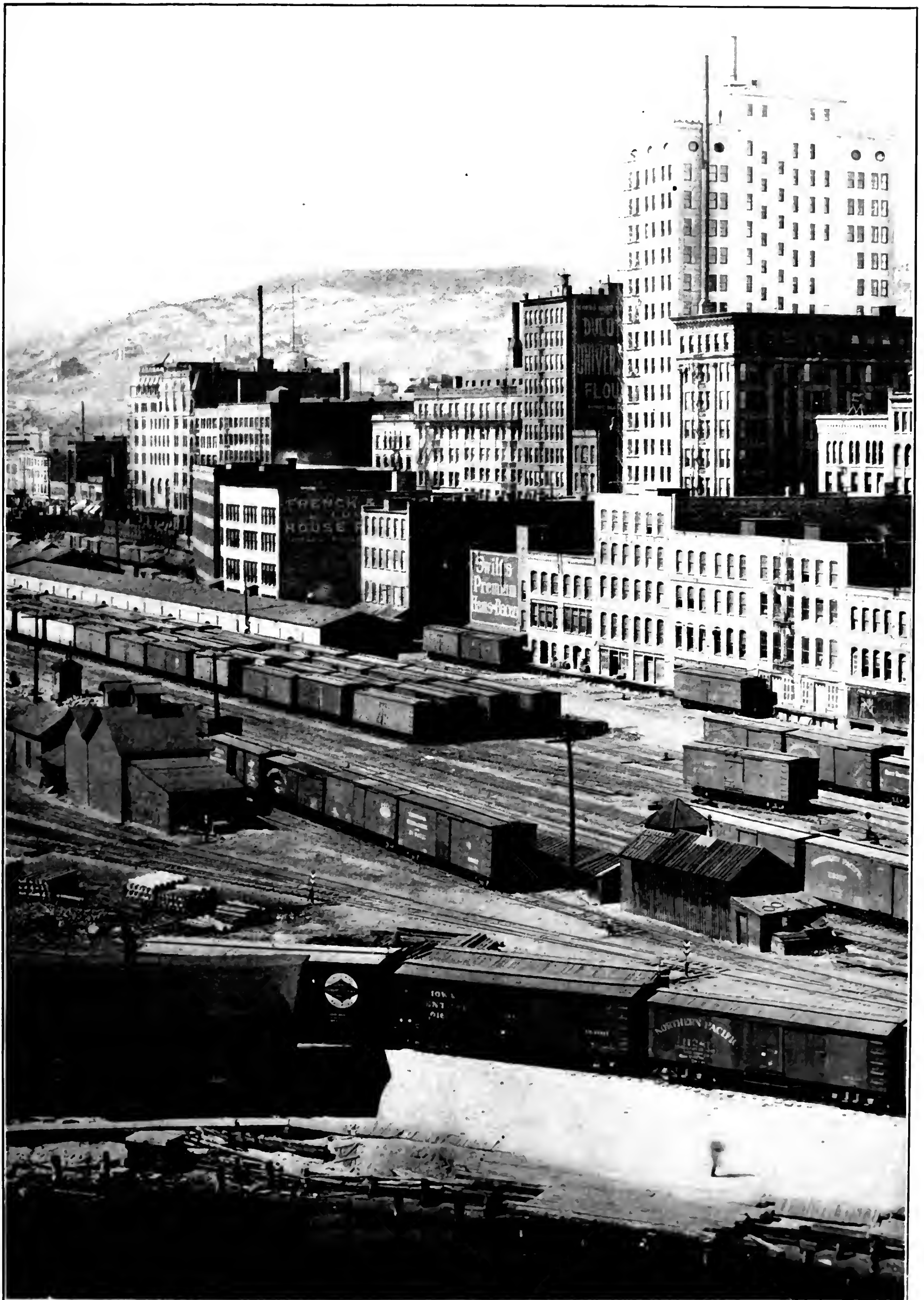
WHO IS EMPLOYED BY THE DULUTH COMMERCIAL CLUB AS SUPERINTENDENT OF AGRICULTURE TO TEACH THE FARMERS OF ST. LOUIS COUNTY, MINNESOTA, HOW TO FARM

Duluth continued to take toll from the wheat and it took a few pounds out of every ton of iron from the ranges, but it had no industries. Back of it lay bare, rocky hillsides, and beyond them nothing but stumps and second-growth forest. This county of St. Louis is 60 miles wide and 120 miles long, but it had never been able to feed even the lumbermen, not to speak of the miners on the ranges and the people of Duluth. The tradition was that nothing would grow on this soil.

But Major Eva, the secretary of the Commercial Club, believed otherwise.

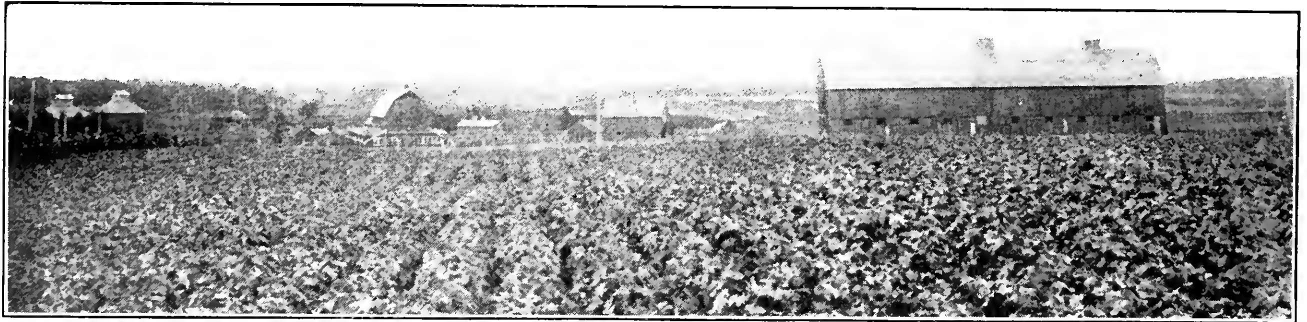
"They never could make me believe that land that would produce as good a crop of trees as that would not produce just as good a crop of potatoes or celery or anything else," he said. "A few other people in Duluth agreed with me, but if it hadn't been for Mr. Craig's experiment with the Jean Du Luth Farm, I suppose people would still be saying that you cannot raise crops in this territory."

Mr. Charles P. Craig had not laughed when Major Eva asked the directors of the Commercial Club what they were going to do to feed an increased population. Mr. Craig and his business associates, ten years ago, possessed several hundred acres of second-growth timber a few miles from Duluth. They had cleared a part of the property, primarily to establish summer homes for their families in the woods, but, incidentally, to experiment in farming in St. Louis County. And at the time Major Eva asked his momentous question they had just discovered that farming on the cleared land was not only possible, but actually profitable. Mr. Craig took the other directors of the Commercial Club out to the Jean Du Luth Farm and showed what he had done. The Duluth Commercial Club has a thousand members and an annual income of $125,000, so



DULUTH, A CITY WITHOUT AN AGRICULTURAL FOUNDATION

BUILT ON THE BLEAK HILLS BESIDE LAKE SUPERIOR AS THE EASTERN TERMINUS OF THE NORTHERN PACIFIC RAILROAD AND AS A FREIGHT DEPOT FOR THE IRON MINING DISTRICT OF THE MESABI RANGE, IT HAS RECENTLY REALIZED THE NECESSITY OF RURAL DEVELOPMENT TO AID ITS BUSINESS DEVELOPMENT



CREATING AN AGRICULTURAL COMMUNITY

AROUND DULUTH, MINN. THE LOWER PICTURE SHOWS THE FIRST STEP OF BLOWING UP AND REMOVING STUMPS; THE MIDDLE PICTURE SHOWS A CROP OF RUTABAGA, AND THE UPPER PICTURE A CROP OF CELERY, THAT HAS BEEN GROWN ON THESE CLEARED LANDS. SOME OF THESE CELERY GARDENS HAVE YIELDED $1,000 AN ACRE IN NET PROFITS. THE DULUTH COMMERCIAL CLUB IS ENCOURAGING ALL PRACTICABLE FORMS OF AGRICULTURE AS A MEANS TO BUILD UP A LOCAL FOOD SUPPLY, WHICH THE CITY HAS HITHERTO LACKED

when it sees an opportunity to do something for the betterment of Duluth it is not only financially able to carry out any reasonable project, but is also able to put behind the project the pressure of organized public opinion.

The moving force in the Commercial Club is its Public Affairs Committee. A new sub-committee on agriculture was formed, and Major Eva was commissioned to engage the best man he could find to show them how to develop the hitherto untouched agricultural resources of their *hinterland*.

Mr. Hostetter had been a farmer all his life and a teacher of farmers in the agricultural institutes of Illinois for many years. The committee gave him a free hand to do whatever might be necessary to enable St. Louis County to feed the entire present and prospective population of Duluth.

"You tell us what to do and we'll do it," was the way they put it.

The biggest problem was that of clearing the land. The old stumps and the new second growth cost nearly $50 an acre to remove. Only intensive cultivation, market gardening, and dairy farming under the most modern scientific conditions, could be made profitable on land as expensive as this.

The unusual high cost also put these lands out of reach of the average farmer. Some means had to be found wherebyeither the necessary capital for clearing the land could be advanced on long-time terms or else the land itself sold on terms that would enable the buyer to get considerable clearing done before the outstanding payments on the land fell due.

The business men of the Commercial Club set themselves at the solution of both these problems, while Mr. Hostetter began active work in the education of the few farmers already located in the county, encouraged the trial of new crops, and began working out plans for getting home-grown foodstuffs into the markets of Duluth.

By this time the business men were becoming enthusiastic over farming, and while the larger projects were maturing, some began trying experiments in gardening in the back yards of their homes. The results showed that anything that could be grown anywhere in the northern United States would flourish on the soil of Duluth and its environs. Some of the earlier experimental gardeners came to grief in their first season by sprinkling their plantations with a hose connected with the city water supply. The sparkling water of Lake Superior seldom rises much above

REV. C. F. GALPIN

WHO SUGGESTED TO THE BUSINESS MEN OF DELAVAN, WIS., THAT THEY MAKE A COMMUNITY SURVEY TO LEARN HOW FAR ITS BUSINESS AND SOCIAL INFLUENCE EXTENDED INTO THE COUNTRY

the freezing point. At the inlet of the Duluth water works the average temperature is less than 40 degrees. But very soon the amateur gardeners of Duluth learned to warm the water in open barrels or to spray it from high stand-pipes in fine, heat-absorbing mist-drops, and the craze for gardening spread rapidly. At first only the wealthier citizens took much interest in it, but the salaried men and

A RESULT OF A COMMUNITY SURVEY

THE HITCH BARN WHICH THE MERCHANTS OF DELAVAN, WIS., BUILT TO ATTRACT FARMERS FROM THE NEIGHBORING COUNTRY TO DO THEIR TRADING IN DELAVAN

wage-workers were quick to see the economic value of growing their own food, and to-day a majority of the homes in Duluth have their own vegetable gardens.

The Commercial Club tried to get the Duluth school authorities to establish classes in poultry-raising and gardening. Failing this in 1910, they got the Young Men's Christian Association to establish daily poultry classes, with much benefit to the backyard chicken farmers of the city. In 1911, the Y. M. C. A. added a school of gardening, and in its enrollment of forty-five are twenty teachers, one from every Duluth public school. And through the efforts of the Duluth Homecroft Association, an organization of amateur gardeners, adult courses in preserving, cooking, and domestic economy generally have been opened during the summer in several of the school buildings. Some of the Duluth churches have held fairs at which prizes were offered for the best home-grown specimens of various vegetables and fruits. The rivalry between members of the Commercial Club in agricultural skill often reaches an acute stage, culminating in one of the parties to the controversy giving a club luncheon at which the chief dish is the bragged-of product of the backyard garden. The good-nature and fellowship that the movement have aroused have been a civic gain.

While the whole city was being aroused to activity on its own premises, two large-

MAKING A COMMUNITY SURVEY

MEMBERS OF THE COMMERCIAL CLUB OF DELAVAN STARTING OUT TO VISIT ALL THE FARMERS WHO LIVE, WITHIN DRIVING DISTANCE OF THE TOWN TO LEARN HOW THEY COULD BETTER THE BUSINESS RELATIONS BETWEEN THE FARMERS AND THE MERCHANTS

scale agricultural developments, in particular, and several others of minor importance, were being carried through, with the result that the county tributary to Duluth is now not only able to feed the city — and the added thousands that the completion of the new plant of the United States Steel Corporation will bring to it — but is shipping into other markets many products that command more than market prices because of their superiority in quality and size.

The Duluth and Iron Range is one of the two railroads owned by the United States Steel Corporation and connecting the great ore-beds of Minnesota with the Duluth-Superior docks. This road was induced to undertake the intelligent development of the agricultural resources of the country through which it runs, beginning by laying out several of its land-grant tracts into small farms, so arranged that the houses, as built, form community groups; and, from each community of this kind, constructing a good road to the nearest railroad station. No lands are sold until the road is built. The land is sold at $15 an acre; payments are $1 to $5 an acre down and the balance is distributed over ten years, enabling any man who has the making of a farmer in him and a limited amount of capital to become the owner in a few years of a fertile, productive farm in a growing community. Many European miners have left the iron range to take up these farms and have uniformly prospered.

Closer to Duluth is a large tract known as "Greysolon farms," much of it within the city limits. The company owning this land, composed of members of the Commercial Club, is clearing off the trees and selling little farms of from one to ten acres, largely to Duluth workingmen, but also to farmers and truck-gardeners from other parts of Minnesota and Wisconsin. These "city farms," cleared and ready for the first planting, naturally command a high price per acre, from $200 to $250, but the proximity of the Duluth market and the proven fertility of the rich, though stony, soil enable anyone who knows the secrets of the market-gardener to make very much more than a living from a comparatively small tract. Farther out, the company develops "Home Farms" in larger units.

To induce farmers to settle in St. Louis County and incidentally to advertise the city of Duluth, the Commercial Club sees to it that the finest specimens of the county's products are shown at every opportunity, and the business men display as much pride in the first prize that Duluth-grown potatoes took at the New York Land Show of 1911 as they do in the increased volume of bank clearings. Bankers and farmers sit side by side in the quarterly meetings of the St. Louis County Club, which is a federation of all the commercial organizations and farmers' clubs in the county and makes it its business to keep an eye on the development of the school system, road improvement, and other vital community matters. The prejudice of the farmer against the city man is rapidly vanishing in consequence.

THE "POTATO SPECIAL"

The activities of the Commercial Club's Superintendent of Agriculture, Mr. Hostetter, extend over the entire county. At his suggestion and under his direction, the iron range railroads run an annual "Potato Special," which stops at every station where there is the slightest agricultural development, and which carries a corps of experts who explain to the farmers the difference between good and bad potatoes and how to grow bumper crops and how, by growing the same variety and shipping in coöperation, to get better prices. An annual "Live-stock Special," to stimulate interest in dairying, is also run.

The Commercial Club also fosters the distribution of seeds to the children of the rural schools, and the organization, in many school districts, of "harvest home" festivities, at which prizes are given for the best garden products and at which whole communities get together and develop the social spirit which the farmer usually lacks. In 1912, thirteen hundred school children were trying to grow sugar beets on half a square rod of land each, for prizes offered by the University of Minnesota. The percentage of successes was so high that considerable areas will be planted this year.

In 1910, after five years of educational

and development work in agriculture, the Commercial Club encou aged the establishment by the nearby farmers of a coöperative produce warehouse in Duluth, to supply goods to city retailers as the commission houses do. Many causes entered into the failure of this enterprise. The stake of the farmers themselves in it was not large enough and it had to be supported by funds contributed through the Club. Not yet enough farmers were shipping to Duluth to insure a constant supply of seasonable produce, and the coöperative project was dropped for the time being. Its place is being taken, largely, by a "market association," organized by Mr. Hostetter, which aims to enable retailers in Duluth to get constant supplies of fresh farm products direct from the farmers, and to give the farmer members the profits of the commission merchant.

LETTUCE WORTH $3,000 AN ACRE

I saw, in Duluth, thirteen acres set out to head lettuce, on the farm of Mr. G. G. Hartley. In 1911 Mr. Hartley had a net income of more than $9,000 from three acres of lettuce, shipping to Chicago after the Duluth market was supplied, and the quality of his product caused such a sensation among lettuce-growers throughout the Middle West that some of the most successful of them, after visiting Duluth, announced their intention of buying farms in the vicinity. Mr. Hartley's farm and the Jean Du Luth Farm, with 600 acres now cleared and stocked with 200 pure-bred Guernsey and Red-polled dairy cattle, Percheron horses, and Shetland ponies, are in a sense demonstration farms where the small farmer and market gardener have object lessons ever before them.

The state of Minnesota, besides, has bought 240 acres close to the Duluth city line and is establishing there a demonstration farm, in charge of experts from the State Agricultural College. And when Sears, Roebuck & Co., of Chicago, offered a million dollars, in the spring of 1912, to be distributed among counties for agricultural education, the Duluth Commercial Club applied for and got check No. 1 from this fund.

Duluth is a northern city — one does not need the evidence of the high-towering ski-slide that surmounts its highest hill to realize that — but alfalfa grows its three annual crops on the Jean Du Luth Farm, and, if berries are a bit late in ripening, they find no competitors in the market. A dozen trout-brooks run from the hills through the city into Lake Superior. One may sit in his garden and catch a rainbow trout and toss it through the kitchen window without stirring from his seat. As I came back from the Jean Du Luth Farm with Mr. Hostetter, wild rabbits scurried across the city streets in front of our car and hid in the dense woods on either side. Hardly a winter passes without deer being shot inside the city limits, and a year or two ago a bear was killed less than a mile from the business centre. So close to the primitive has Duluth remained, content to take toll of passing commerce without herself adding to the world's wealth. The new community spirit that the movement for farm development has inspired is cutting off the forest, driving the deer and the bear back toward Canada, and laying the foundation for a bigger and better Duluth, to be the metropolis in its own right of a rich and happy land of fertile farms.

Wise business men everywhere are seeing the American problem in this new light of agriculture. The bankers and business men of North Dakota are trying, through their "Better Farming Association," to develop the agricultural resources of an entire state, and so, in a lesser degree and on a smaller scale, such towns as Delavan, Wis., are trying, through the coöperation of their business men, to build up their adjacent rural communities.

THE CASE OF DELAVAN

Delavan is a village of twenty-five hundred inhabitants in Walworth County, Wis. Essentially, it is simply a trading centre. It has but one industry — the Bradley Knitting Mills. Founded three quarters of a century ago as a temperance town, it now has rather more than its share of saloons, besides wide, shaded streets, a well-built but badly managed hotel, electric lights, a park, a milk condensery, a public library of unusual excel-

lence which does not bear Mr. Carnegie's name, many rather pretentious dwellings of village magnates, prosperous churches, a high school, and two weekly papers.

A few years ago Delavan, instead of being progressive, was distinctly losing ground. A fifty-thousand-dollar railroad bond issue had been riding the town like an Old Man of the Sea, eating so much of the tax levy that it seemed a hardship to ask the property owners to spend money for anything but interest. The town was untidy. Grass grew in the streets, the yards were dirty, the roads leading out into the farming territory were badly constructed and poorly maintained.

It began to dawn upon the business men of Delavan that there might be some connection between these conditions and the decrease in their trade with the farmers, and the sluggish condition of farm land values. So, by common consent, despite a strongly protesting minority, the village taxes were quadrupled and the railroad debt paid off in one year. A new high school building was erected; sewers were constructed and a water-works system established; an electric lighting plant was installed; the village streets were graded, macadamized, and oiled, and the country roads for miles around were improved. The women of the village got together in an "improvement club," the main purpose of which was to improve the community housekeeping, by cleaning up yards, painting weather-beaten houses, and repairing tumble-down fences — or, at least, persuading the owners to do so.

Simultaneously they began to reach out after the trade of the farmers and to develop a community spirit that now reaches miles in every direction from the village and is constantly extending its influences. New stores, better stocked, replaced the old mercantile establishments. The two banks vied with each other in extending courtesies to out-of-town customers. A "Delavan week," during which special bargains were offered by all the stores, and free entertainment provided at the Opera House for visiting farmers and their families, proved so successful that it has become an annual winter affair. Farmers' institutes and poultry shows were organized, concerts, theatrical entertainments, and winter lecture courses were arranged for, and special inducements were held out to farm folk to attend them. Baseball games and field carnivals were the attractions for the warmer months. A bequest by a wealthy citizen for a free library was trebled by popular subscription, and the farmers' families hold nearly one third of the membership cards.

WHAT A RURAL CENSUS SHOWED

Having got this far, Delavan paused to contemplate results. It was plain that the community influence was considerable and beneficial both to the farmers, whose lands were increasing in value, and to the townspeople. No one knew, however, how far the community influence extended in any particular direction, nor which particular phases of it were making themselves most strongly felt.

It was at just this time that the Rev. C. F. Galpin, the Baptist "student pastor" at the University of Wisconsin, visited Delavan. Mr. Galpin has interested himself for several years in the problems of rural communities and has set on foot a series of rural surveys that are now in progress in various parts of Wisconsin. Mr. Galpin proposed a survey to determine the extent of the community influence of Delavan, as a basis for further efforts by the business men. Eight phases of community interest were selected as indices of the relations between the village and the farm. They were the dry-goods store, the grocery store, the newspapers, the churches, the high school, the public library, the banks, and the milk factory.

A map was prepared that showed every farm house within five miles of Delavan. Every house was then checked off on the map in accordance with its relations to Delavan in one or another of these eight connections. A line drawn on the map so as to enclose the most distant farms having a particular community interest with the village thus disclosed not only the extent of that interest's influence, but the gaps and weak spots in it.

The grocery and dry-goods store influences were found to extend the farthest in every direction, and to be nearly co-

• Farmhouse — Church — Road

Bank — Extent of Influence of Bank
Grocery — " " " " Grocery
Dry Goods — " " " " Dry Goods
High School — " " " " High School

Churches — Extent of Influence of Churches
Library — " " " " Library
Paper — " " " " Newspaper
Milk — " " " " Milk Factory

MAP OF A BUSINESS AND SOCIAL SURVEY OF A RURAL COMMUNITY

BY WHICH THE MERCHANTS, MINISTERS, AND CITY OFFICIALS OF DELAVAN, WIS., LEARNED WHERE THEIR TOWN'S INFLUENCE WAS WEAK AND HOW IT COULD BE STRENGTHENED

extensive. Just inside these lines came that of the bank, with the milk factory line following it closely, except for occasional breaks. The line of influence of the Delavan churches was broken, as was expected, by the presence of several churches in smaller villages within the general sphere of influence. A striking diagram was formed by the line marking the boundaries of the public library's activity. It radiated in long star-points with wide blank spaces between them.

Investigation disclosed whole communities of Norwegians and other non-English-speaking people in the blank spaces, and steps were immediately taken to provide books in their mother-tongues for these families and to establish branch library centres in other "weak spots."

Most curious of all the outlines was that indicating the limits within which the high school attracted pupils. North, west, and south its range was as far from the village as most of the purely commercial activities, but eastward this line was a scant half mile from the town. It seemed incredible that there should be no children of high school age in the wide area between the high school line and that of the grocery, and inquiry revealed that this was not the case. The children were there, but they were attending the high school at Elkhorn, seven miles east. To the inquiries of the investigators as to the cause of this condition came such replies as:

"Too many frills on the Delavan High School."

"Boys at Delavan too much under city influence — they wear white shirts and turn up their trousers."

"Good agricultural course at Elkhorn, none at Delavan."

When I visited Delavan, in June, 1912, the school authorities were arranging to add an agricultural course to the high school curriculum and in other ways to make it attractive to the boys and girls within its normal sphere of influence. The Jackson & Jackson Company, the largest grocery, hardware, and shoe dealers, had just put into commission two three-quarter-ton motor trucks with which they were making regular deliveries of goods from their own store and from the Bradley Company's drygoods store in the entire community territory, serving many new customers whom Mr. Galpin's survey had indicated as unaffected by the community influence, as well as their old ones. The business men as a whole had just finished a community "hitch barn" for the use of visiting farmers; and that very morning fifty of Delavan's merchants, in motor cars, were setting out on a tour which took in the entire range of their business connection and more, and included a personal call on every farmer so situated that he could be reached on a continuous tour.

Duluth, for its own greater prosperity, is creating a farming community; Delavan, likewise for its own prosperity, is developing a community spirit among the farmers that is redounding to its own advantage as well as that of the farmers. In both cities the business men have shown that they understand, more clearly than most, the essential interdependence of business and agriculture, and prosper accordingly.

ADDISON BROADHURST, MASTER MERCHANT

CHAPTER II

A SHORT NOVEL OF BUSINESS SUCCESS

BY

EDWARD MOTT WOOLLEY

I HAD gone up very fast, but not fast enough to suit me.

I was now twenty-six years of age and in some ways abnormally developed, yet, as I said at the close of the last chapter, I had come up a flight of circular stairs. I had developed along one narrow line chiefly. It was no broad marble stairway of knowledge that I had ascended.

I had become, I may say, a man of some polish, and had done a vast amount of reading. I was tolerably familiar, for instance, with Dante, Chaucer, and Spenser. I liked the "Life of Charlemagne,' and for a change I read Cervantes. There

were times when I amused myself with mathematics.

I was drawing a salary of forty-five hundred dollars a year, and was living well but not expensively. By degrees I had come up from my first barren lodging-house, east of Union Square, to comfortable bachelor quarters on Madison Avenue.

It was about this time that I met a young woman whom I shall call in this history Ruth Starrington, a daughter of an old Manhattan family that lived modestly in an old mansion around a corner from Fifth Avenue. They were not rich, yet there seemed a great gulf between Ruth Starrington and me — a gulf chiefly of caste. I made up my mind that if I were to marry her I must work some sort of magic and get into her class.

I wanted a home not only for myself but for my two sisters, Jean and Bessie. The latter I had recovered by law from her foster-parents, who had put her at work in a factory. Jean I got back by force. I went to West Harland, drove in a hack to the farmhouse where the child lived, and carried her away before her cruel foster-mother got her wits. A mad race we had of it back to West Harland with Jean's enemies tearing along after us in a buggy; but we left them behind and caught the express with a margin of only half a minute. After that I defied them.

As to Margaret, my eldest sister — well, Fate intervened before I could carry out my plans to help her.

I tell you these things so you may understand the pressure upon me — the things that led me to quit my position with Lombard & Hapgood.

In the Lombard store was a young man named Sanford Higgins. He had come down from New Hampshire a few years before, and, finding himself unable to get an office job, had worked first in the stable of an express company; then as a driver; and finally at Lombard's. He was now buyer in the silks, and he went to Europe two or three times a year.

One day I went up to his office and drew a chair to his desk. "Higgins," said I, "to make money, a fellow must get into business."

"Yes," he agreed, "I've been thinking of that. But I shouldn't care to quit Lombard's on an ordinary proposition. Unless there's a whopping big winning in sight, I'll hang on here until I see a sure chance to make a killing."

This conversation shows our mental condition at that time. We were unseasoned boys, planning to set sail to the Treasure Island, but having no charts to guide us. Besides, the big winnings go to men who are willing to start little and grow into things.

I arranged to meet Higgins that night at Delmonico's to talk the thing over. I remember that we started the dinner with *canape Norwegian* and bluepoints. I recall all this fully now. Delmonico's or Sherry's isn't the place for two poor young men to plan a business. There is more than one kind of intoxication, you know. We didn't have any wine — neither Higgins nor I touched it — but a man may be drunk on atmosphere.

So the whole project, you see, came to take on the glamor of a foolish young man's love affair.

I went up to call on Miss Starrington that evening, and for the first time I went in a cab. As a mere superintendent, the traction lines had been quite good enough. But now they palled on me.

With some pomposity, I told Miss Starrington that I was going into business. "Broadhurst & Higgins will be the firm name," said I, emphasizing the first name.

It was really a brilliant affair — the grand opening of our little department store in the city of Lost River (call it that), a night's ride from New York. The main aisle was decorated with gilded autumn leaves, and palms and potted plants adorned the top of the fixtures. Outside, the building was draped with all the art of the New York decorators whom we had brought down there to do the thing in true city style.

You see, Higgins and I meant to show Lost River how New Yorkers ran a store. Lost River, with its population of 50,000, needed educating in metropolitan ways.

We had investigated a number of towns, but this little city appealed to us most. "A pretty town!" commented Higgins,

as we drove about on a tour of inspection. "Look at that stone residence up on the terrace! Why, that's something like it. If we can corral the trade of such people, Broady, we can make our killing down here, sure enough!"

Yet it hurt Higgins, as well as myself, to cut loose from those happy days with Lombard & Hapgood. Wonderful days, indeed, they had been. To break the mystic tie that bound us to Manhattan required a conscious sustained effort. The mighty town had woven its spell of magic about us until the blood that flowed through our veins was tinctured with the indescribable glamor of the metropolis.

But we were not coming down to Lost River to stay! We should not have thought of coming at all except for our limited capital. What could we do with it in New York? we asked. We would not think of starting in Manhattan on less than $100,000, and the very best we could do at the present time was less than a third of that. But we could make a showing in Lost River; and then, in a few years, we would take our winnings and go back to New York.

The capital of Broadhurst & Higgins was $30,000. Of this, $21,000 was represented by the cash savings of my partner and myself. My contribution was $9,000; Higgins was able to put in $12,000. We considered the excess on Higgins's part as an advance.

On top of this cash capital we set out to raise an additional $9,000. I proposed a plan of promotion. "I'll lay the proposition before ten of my friends," I said, "and get each to contribute $450, at 10 per cent. interest on a special partnership agreement. You do the same with ten of your friends. I'm sure there are fellows enough at Lombard & Hapgood's who'll be glad to come in. You and I are well known, Hig, and we've got the standing!"

So we had! I raised my $4,500 without extraordinary effort.

We decided that we ought to put in $60,000 worth of goods — retail valuation. Now, unfortunately, there isn't any golden rule to go by in credits. Even if there were, perhaps it would be broken with the same abandon that men display in violating the golden rule of the gospel. Anyhow, the only rule followed in selling goods on time is the variable one dictated by the school or type of business from which each particular credit man graduates.

There are a good many such schools; but likely as not the credit man never graduated at all. Or mayhap he stole his diploma! It ought to be against the law to embark in the practice of credits without a license from a state board of lunacy.

To recapitulate: We had $30,000 in cash. Of this we set aside $25,000 toward goods. Our original stock cost $41,000, on part of which we secured datings. Thus, after providing for our initial goods, we had a fund of $5,000 in cash remaining.

Out of this we paid $1,500 on fixtures and let the balance of that item run on instalments. The total cost of the fixtures was $2,500. Our rent was $300 a month, and we paid for two months in advance. Then we put $500 into preliminary advertising. All the other expenses of getting started reduced our cash reserve to less than $2,000. This wasn't so bad, however, and we felt quite like financiers — to come through these costly preliminaries and still have a couple of thousand dollars in the bank.

A lot of men are lords when they are out among the boys with $10 in their pockets, no matter how hard the grocer and butcher are hammering on the back door at home with long bills in their hands.

But of course we had the game all figured out. We knew that the ordinary enterprising merchant of our class tried to turn over his stock at least four times a year. We did not admit that we were ordinary merchants — we came from New York. We intended to effect a turnover of five times, anyway. We knew something of the remarkable exploits in merchandising by Lombard & Hapgood.

So we fixed our first year's sales at $300,000; we were content not to set our pace as fast as Lombard's.

Granting we could do this, it was easy to calculate our prospective profits. Expenses, at 22 per cent. of the sales, would be $66,000 — though we were confident that with five turnovers in a year we could

cut this item to very much less than 22 per cent. Our goods, we figured, ought to cost us about $200,000.

It was a nice problem in arithmetic, you see. We would pay out $266,000 and take in $300,000. Net profit, $34,000!

Then, at the end of the first year, we could pay off the twenty special partners. Their claims, with 10 per cent. interest, would aggregate $9,900. Higgins and I would each draw out $4,500 during the year for living expenses, and we would pay the instalments due on fixtures. Allowing for contingencies, we would have a surplus of at least ten thousand dollars to apply on goods.

By the close of the second year all our original debts would be paid, and we could enlarge the business. After that, we meant to grow in geometrical progression.

There is nothing like having a definite scheme to work by. Plans are the life of the architect; without blueprints and tracings he would become a mere carpenter, brick mason, or iron-worker. In the architecture of business, too, one must have drawings and elevations and so on. But the trouble with many a business builder is that his plans are mere examples of Roman or Hellenic styles, imposing enough to make the ordinary tourist in business pause in awed silence, but not adapted to practical occupancy.

Well, I said that the grand opening of Broadhurst & Higgins was a brilliant affair. But a grand opening may have a great deal of éclat without necessitating an extension of the overhead cash system.

"There is only one course open to us," I said to Higgins one night, six months later, as we sat in our little office at the back of the store. "I must go up to New York for help."

It was late in the evening; our establishment had been closed for hours, and the electric bulb on Higgins's desk showed reddish white in the deep gloom about us. Higgins was leaning one elbow on his desk, his head in the glow of his lamp and his face showing sharply defined.

"We are going down hill mighty fast," I said. "If we can't stop the descent, Hig, we're gone!"

"Your logic is indisputable," he returned. "But I can't just see what you are going to do in New York."

"Raise capital!" said I.

"If you can raise capital anywhere, you can do it in New York," Higgins conceded. His accent, however, showed that he had no faith now even in New York.

I tried to display confidence. "Hig," said I, "New York is capable of anything. I'm going up there on the fast mail to-night."

"She doesn't stop at Lost River," said he, with the same apathy.

"Then we'll stop her!" I returned, and picked up the telephone receiver at my elbow. "Give me New York," I said.

I had the metropolis on the wire within a couple of minutes, and soon got my friend, Homer Outerbridge, at his home. Outerbridge was general superintendent of the L. R. & W. Railroad. I had first met him at the Noon Club in New York, and afterward we had gone fishing together one vacation up in Maine.

Well, that was all there was to it. It is a good plan to have as many high-up men on one's list of acquaintances as possible. I would rather have one colonel for a personal friend than half a dozen lieutenants.

At 12.42 that night I climbed aboard the train at the Lost River station, and throughout the rest of the night I stared up at the under surface of the Pullman berth above me. The crisis of my short business fever was at hand. It was a situation hard to accept — that I, the shrewd and successful Addison Broadhurst, should have entangled myself in such a net of failure within a few brief months!

But I had learned one thing of overwhelming importance: There is a great difference between success as an employee and success in business for one's self. The engineer on our locomotive, I told myself, was successful, or we wouldn't be rushing along at such a terrifying pace through the darkness; but his success was not that of the men who built the road, financed it, and made it earn dividends.

Our department store at Lost River had done badly indeed. In six months we had sold less than half the volume of

goods we had expected to sell, and our ratio of expense had been more than 30 per cent. We had started out to limit our clerk hire to 6 per cent. of sales, but somehow this did not work. We had tried to limit the aggregate cost of help, exclusive of our remuneration as proprietors, to a tenth of sales; this, likewise, refused to work. Competition had prevented our marking goods high enough to offset the drain and to give a fair profit. To do this we should have had to mark our goods 75 per cent. above cost. The most we really could add was 40 odd per cent.

So those poor little native stores of Lost River had us cornered. We had gone there to show them how New Yorkers sold goods, and they were squeezing the braggadocio out of us. And we were trying to do a credit business, too. We had a big chunk of capital outstanding.

We were broke — flat broke and running on credit. The local banks were carrying us for the moment, without knowing how desperate our situation was. We knew the bubble must burst very soon — it might come any day. Nobody but my partner and I knew how bad our business had been. We had distributed our buying so that none of the jobbers could know anything definite about our affairs, and we had kept up appearances with considerable skill, even to our personal matters. It would never do to grow seedy, we both agreed; so we went on living at the high-priced Grand Union Hotel and mixed not a little in Lost River society.

Phelps Lombard sat at his desk when I entered his office next day.

"Well, Broadhurst, how are you?" he said, with the same kindly light in his eyes that I knew well. I was always a great admirer of Lombard, and a fine strong character he was. There was strength in his prominent nose, decision in the contour of the beard that hid his chin, and friendliness in his manner. "What's the matter?" he asked suddenly. "Are you sick, Broadhurst? I fear you are working too hard. My boy, you're in too big a hurry to get rich."

I sat down in the chair beside his desk. "I'm not sick," I said, "but in one respect your conclusions are right. I have been in too big a hurry to get rich."

Lombard leaned back in his chair and looked at me a minute before he answered. "How bad is it, Broadhurst?" he asked.

"Twenty-five thousand dollars will put us on our feet and pull us through," said I.

"How do you figure it?" he asked.

I had come prepared. From my pocket I took a sheet of paper on which I had tabulated our financial status. I'll not recapitulate here all our miserable debts. We owed the banks $6,200; we were behind in our advertising settlements about $2,100; we had petty bills fluttering over us from every direction, were in the hole worse than ever at the jobbers'. We owed for goods nearly $20,000.

Lombard took my tabulations and went through them by himself. "What makes you think that $25,000 will put you on your feet?" he asked.

"It will ease off the strain," I told him, "and give us a chance to go out after trade. Oh, we've had plenty of unexpected troubles! You see, there are a lot of old-time families and cliques down there at Lost River, and when we started we didn't properly gauge the difficulty of swinging their trade. They've been accustomed so long to buying of those confounded little Lost River stores that it's like pulling teeth to get them away, especially as a great many of the best families are tangled up with the native stores through marriage relationships. Then there are social ties that bind a lot more of them. But we'll get them, if only we can raise capital enough."

"Tell me all about Lost River, its stores and its people," said Lombard.

So for half an hour we talked, and I gave him a word-picture of my little city and its old-fashioned notions of merchandising.

"Why, half the women down there," I said, "call for grosgrain silks, and sniff when we show them our taffetas, moiré antiques, and satins. And a lot of the house-wives clamor for domestic calicos; they won't have the percales and imported ginghams."

And then I cited umbrellas as a typical instance. We had taken a big stock of these goods — fine silk ones with orna-

mental handles — and tried to feature them as a leader. But we found ourselves "stung" on more than half of them. The people down there wanted cotton umbrellas — thirty-inch affairs with a hook on the end of the handle. Those little silk contrivances were mere toys, they declared. And a lot of the Lost River folks refused to buy our rugs, preferring carpets — even for hardwood floors.

It was I who did most of the talking for a time, and Lombard merely asked questions; but after I had covered the situation rather fully, as I thought, he took the initiative. He also took a sharp knife, as it were, and quartered me.

"I'll tell you just where the trouble lies," said he. "You and Higgins have shot sky-high over the roofs of Lost River. Few men who live for any length of time among the big affairs of a large city are capable of dropping gracefully to the lowlands of a small community. They can't do it unless they first get into a hydraulic press. When they settle in a location that is strange to them, they commonly try to do business under the conditions that surrounded them formerly. Once I knew a Boston man who went to Phoenix and started a book store. He commenced with a special campaign featuring a thesaurus lexicon, and he couldn't just see that Phoenix didn't give a whoop for the best treasury of words in America."

He went on for a time with advice I knew to be sound, and then he startled me. "Experience is often the best teacher," he said. "Charge the loss up to education, Broadhurst, and make the best of it. If you want to come back to us, your old job is open."

"Then you think there is no hope for us?" I asked, rather faintly. "You don't see any opportunity to put money into the business? I came here, Mr. Lombard, hoping I might interest you — as a business proposition pure and simple."

"My boy," he said, "I'm sorry for you. Almost every day I have these 'opportunities' presented to me. I might have invested a million dollars in them during the last few years. If I had, the store of Lombard & Hapgood would not be a figure in New York's bank clearings."

"You can see no chance to make money in Lost River?" I ventured, huskily.

Just then the office boy brought in a card, but Lombard waved it aside. "I am engaged," he said. Then he locked the door, after the lad had gone out. "Since we are on the subject of opportunity" — he turned to me as he spoke — "we'll dissect it."

"The population of Lost River," he said, as he paced slowly to and fro, "is about fifty thousand, I understand?"

"Yes, very nearly," I told him.

"But of course Lost River itself does not measure your opportunity," he went on. "There are numerous towns near it, and a large country population. The whole territory is well supplied with merchants, yet this fact of itself is not especially significant. I've seen merchants go into towns that were heavily overstocked and make brilliant successes. They did it, of course, at the expense of their competitors. The main question, then, is this: 'What quantities of goods can a given territory absorb and what kind of goods do the people want?'"

"True," said I.

"What is the total population of your potential selling zone?" he asked, wheeling suddenly toward me.

"Two or three hundred thousand people," I told him.

"You are too far apart in your maximum and minimum estimates," he returned.

"I can give only an approximation," I confessed. "Besides, 60 per cent. of this population, perhaps, is made up of factory workers. We are not especially interested in them."

"I don't like the word 'perhaps,'" said Lombard. "When you say that 60 per cent. of the population, 'perhaps,' is made up of factory workers, the statement sounds to me like a guess. But let us assume that 60 per cent. is correct. That leaves 40 per cent. from which you draw your trade chiefly. Now why did you elect to cater to the 40 per cent. instead of the other 60 per cent."

"We didn't want to run a junk shop," said I, rather warmly.

"Do you know how much money this

60 per cent. spends annually, or how much the 40 per cent. spends?"

"No, it would be very hard to answer that question. This 40 per cent., of course, includes various classes of people. It embraces merchants, well-to-do farmers, professional men ——"

"How many well-to-do farmers?" inquired Lombard. "Well-to-do farmers are good people to have for customers. How many are there in your district?"

"I can't say," I admitted.

"Well, how many professional people — doctors, lawyers, ministers, writers, artists, teachers, scientists, editors, and so on?"

"Perhaps five hundred," I hazarded.

"Or *perhaps* a thousand?" suggested Lombard.

I was silent. A light was beginning to break over me. But Lombard went on dissecting my business anatomy.

"How many women are there in your 40 per cent.?" he asked.

"I don't know. I suppose ——"

But he cut me off: "Let us not suppose anything. Can you tell the number of upper-class society women in your zone, or the number of middle-class society folk that might be induced to trade with you"?

"No."

Lombard took a new tack. "Well," said he, "let's look into that other class of people — the working population, so-called. How many of them are foreigners?"

"Possibly seven tenths," I ventured.

"Possibly five tenths or nine tenths?"

"Possibly," I admitted. I was getting tired of this sort of grilling.

"What are the proportions between the different nationalities, Broadhurst, and how many are married men and heads of families?"

"I don't know."

"How many are bachelors? Single men, you know, present wholly different problems, as customers, from men who buy supplies for family use! How many cling to their foreign notions in merchandise, and how many are Americanized?"

"I can't tell you," I said. "I don't just see how it would be possible to find out without a prohibitive study."

"It is possible to find out a great many things, Broadhurst. When a man's in business he *must* know his markets."

"We didn't count much on the working classes —" I repeated, but he cut me off.

"I am merely trying to show you that you may apply the same analysis to all classes of people. You didn't do it. Higgins was tied up in silks and laboring under a load of Parisian models; you were intent on the introduction of a thousand store ideas you had absorbed here in New York."

As he talked I couldn't help but think of our broadcloth suits, ermine-lined opera cloaks, and imported hats down at Lost River — gathering dust and taking up space that might have been used in a profitable way.

"Now don't misunderstand me," Lombard went on, and he turned and opened his checkbook. "I am not judging your opportunity for you, Broadhurst. Far from it! I don't pretend to say what might have been done down there, or what opportunity may be waiting there now. Before I could give you a reliable opinion, I should have to go to Lost River and study the situation — probably for weeks. I cannot consistently engage in a mercantile adventure at Lost River."

I sat there, crushed and despairing. Mechanically, I watched him as he wrote out a check and tore it from the book. He held it out toward me. I took it, scarcely knowing that I did so.

"I cannot go into the business with you," he said, "but I want to show that I feel a true friendship for you. For seven years, Broadhurst, you served me well and contributed in no small measure to the success of this business. I have long wanted to do this simple act of justice. Take this money and keep it for your own individual uses. You may have need for a personal fund. And remember that your old job is waiting for you."

I glanced down at the check; it was drawn for $5,000. I can't describe the emotions that beset me, and I shall not make the attempt. But after a minute I put the check back on Lombard's desk.

"At any other time," I said, "I should feel justified in accepting this generous

gift. If it came to me in a period of prosperity, I should take it as a token of your esteem and confidence. But, coming as it does, when I am little better than a supplicant, it savors too strongly of charity. I didn't come here to beg. Even if I lose everything else, Mr. Lombard, I can at least save my self-respect. You will grant me that privilege, I am sure, and understand my sentiments."

As I uttered these words I arose and took up my hat. Mr. Lombard got up, too, and held out his hand without a word. Without a word, I took it. For the life of me, I could not have spoken just then. For a few seconds we stood with hands clasped; then I turned and walked out of his office.

As I entered the lobby of the Fifth Avenue Hotel shortly afterward, I heard my name called in a drawling cry. I turned quickly and intercepted a hotel page who carried a silver salver with a yellow telegram upon it. Quickly I snatched up the message and tore it open.

(*To be Continued*)

THE MARCH OF THE CITIES

HOW FRESNO'S CITY FARM IS PAYING FOR THE MUNICIPAL SEWAGE SYSTEM

SEVERAL years ago, Fresno, Cal., bought a farm of 812 acres of raw land as an outlet for the city sewage system. The price was $30,800, or about $38 an acre. Last year, with about 400 acres of it under cultivation, the farm paid the city a net profit of $8,600. The managers estimate that this year, with a larger share of the land in use, a profit of more than $15,000 will be earned.

Fresno's sewage is treated by the "septic tank" process, by which the entire effluent of the sewers is sterilized by the natural action of harmless bacteria, and is divided into purified water and a solid matted sediment. The farm, therefore, is provided with plenty of water for irrigation and with an abundance of excellent fertilizer. The difficulty of disposing of this effluent was the reason for the city's purchase of the farm. No matter where the outlet of the sewers was placed, neighboring ranchers complained that it was a menace and a nuisance.

At first, the city officials thought it wise to lease the farm to a private concern for a long term. But that plan did not work well. The lessees did not understand how and when to dispose of the sewer effluent, and they complained that the land was flooded when it should be dry and even threatened suit for damages in consequence. The dissatisfaction of both lessor and lessees became so acute that both were glad to declare the lease off. That was three years ago.

Then the city officials decided to manage the farm themselves. A committee of the board of trustees was appointed by the mayor to take charge, and the chairman of that committee became practically the superintendent of the farm. He chose alfalfa as the crop best adapted to the soil and to the size of the farm. In 1910, the crop paid running expenses. In 1911, 200 acres were planted. Last year, 300 acres were put in alfalfa and 100 acres in grain hay. In the meantime, contracts of sale for the alfalfa had been made at $11 a ton so that a market was ready when it matured. The results of last year's operations were these:

Alfalfa (1,300 tons)	$14,300
Grain hay (125 tons)	2,375
Fees for pasturage	1,000
Total	$17,675

The grain hay was fed to the horses of the city fire department and, though no cash was paid for it, its value was credited to the farm at the market price of $19 a ton. The expenses of the farm and the investment in improvements were about $9,000, so that the net income for the year was approximately $8,600.

Part of this profit will be used by the city to reclaim some of the remaining 400 acres from alkali. This is done by leaching small areas of the alkali land, about 20 acres at a time. This washing process renders the soil fit for cultivation. It is then plowed and laid out in small squares surrounded by irrigation dikes and called "checks."

The profits from the farm this year will probably be sufficient to pay all the cost of maintenance of the city sewer system, including cleaning and repairs. Besides this, these profits will provide the money to pay all the interest charges on the $175,000 worth of city bonds that were issued to build the sewage system, and will provide several thousands of dollars for the sinking fund to wipe these bonds out of existence. And the value of the city's investment — the land itself — has risen under its wise management from $38 an acre to $300 an acre for the cultivated portion, or from about $31,000 to about $135,000 for the whole farm.

Thus, by turning farmer, Fresno has made an excellent business investment and has lowered the tax rate of its citizens.

FORWARD TO THE LAND

THE FARM AS OLD AGE INSURANCE

IN THE WORLD'S WORK for July, 1912, appeared an editorial comment comparing the farm mortgage and the actual ownership of a farm as investments. There are few better securities than a good farm — if the right man invests. However, there is many a farm seeker to whom any farm will bring little but failure and disappointment.

Which of these are you? The difference is based mainly on three elements: your conception of what a farm is and does; your real reasons for taking up farming; your equipment and preparedness for the business.

Some quotations chosen at random from the many letters about land that have come to the WORLD'S WORK indicate the need of further discussion of this aspect of farming. The following, for instance, are characteristic of one large group of farm seekers:

"I have practised medicine for thirty-three years, but from exposure and strain have broken down nervously and, to some extent, physically. I have $4,000 and have thought of combining fruit and poultry to provide for my old age, but here in California, where the climate is very congenial, land is too high priced."

"I must move to a warmer climate on account of a nervous wife and son. I can invest about $2,000 without using up all my capital, and have been thinking of farming or gardening, but my knowledge of both is very slight."

"What we want is a place two or three miles out of town and if possible on a railroad, within ninety minutes of New York City. We prefer a high elevation, near river or lake, with necessary barns, out-buildings, etc."

"Is there any scope for taking up paying land and where? I could invest $3,000 but have no farming experience whatever. I am doing very well in business in Bombay, India, but competition is getting too keen and the climate is not attractive."

"What are the chances of my succeeding? I am a college trained engineer with about $1,100, no actual farming experience, but I would like a general farm in central Massachusetts."

Every one of these cases seems to indicate one of two conditions. Either the man is physically unfit for active work and thinks that a farm will support him while he "rests up" and improves his health by means of recreation and gentle exercise; or else he is tired of his present occupation, has an aversion to hard work, and feels that farming, with its simple (?) tasks and independence, is the job for him.

The independence of the successful farmer is much to be desired, without a doubt; but what some people consider independence is better described as free-

dom from responsibility and duty and hard work. Certainly it has little in common with the independence that comes with the tilling of the soil.

Of course, the sort of farm these writers have in mind is a greatly desired end, but it usually takes more capital than they have for inexperienced men to get farms, not to mention manage them; for most of these letters do not sound as if the writers could or would give 300 days' able-bodied labor a year to the farm, or had money to hire it done for them.

The young man with a distaste for work will find the average close-fisted, self-made father lavish in his generosity compared with a farm. The man in poor health need not expect the farm to pour out its bounty at his feet while he recuperates unless during that time he can make plans that will make enough or save enough money to make up for his lack of physical work. Many men have done this. Men and women who could not plow or hoe have made as successful farmers as any one else.

But it means brain work. Likewise, it usually means capital. For example, another of the letters that are received by this department reads as follows:

"I am a physician, forty-five years old, and have been practising for twenty-two years. Thus far I have made a good living, but under the conditions of practice to-day, and living as we are obliged to do, there is no surplus at the end of the year and I can easily foresee that in the near future there will be a deficit. We all — my wife, two boys, and myself — are fond of the country, and I can see no future for the boys in a mercantile life. I have about $10,000, as well as securities that bring in an income of $1,000 per year.

"My plan is to buy a farm near fairly good schools, etc., in Massachusetts or Connecticut, including ten acres or so of apples, a livable house, garden, and other improvements. I would expect to hire a working farmer and his wife. What is your opinion?"

This is a well thought out, wholly possible, and highly desirable plan. Here, too, there is inexperience but also capital with which to hire skilled labor and to reduce the need of profit from the farm at the outset.

Suppose that he invests in safe stocks or bonds paying as much as 6 per cent. interest. This interest, with his former income, gives him only $1,600 a year and no home, no food supplies, no recreations in addition. How far will this go toward supporting a family of four?

On the other hand, for six or eight thousand dollars he can find in New England, New York, and in other localities, just the place he seeks. Fifteen hundred dollars more will install a satisfactory — even if temporary — water supply, a sewage disposal system, lights, and other conveniences. For six hundred dollars a year cash and other perquisites largely derived from the farm itself he should obtain a trustworthy, capable working foreman by whom the farm, if worth the price, can be made to give the family far more than the entire $1,600 could supply in the city. As the members of the family learn to make their work effective, expenses will be further reduced and the income still further augmented.

Such a farm is one of the highest types of investment for a living.

WHY CHEAP FARM LAND IS DEAR

THREE business men — let us call them Smith, Jones, and Brown — decided to become farmers. They had been raised on farms, had attended short courses in practical farming, and had read enough reference books to have gained a working knowledge of scientific agriculture.

Smith, by slow, methodical, conservative practices that characterized him, had accumulated about fifteen thousand dollars. With this he bought, in a thriving, well-populated section of Illinois, an improved 90-acre farm with buildings, tools, and some good stock, for $200 an acre, paying $10,000 down and assuming a 6 per cent. mortgage for the balance.

The success of his already established neighbors with hogs, alfalfa, seed corn, and beef cattle led him to follow suit.

He joined the grange and the local coöperative organization, sent his children to a consolidated rural school, and settled down to a business that soon began to make annual payments of 8 to 10 per cent. on his investment.

Jones and Brown were of a more speculative disposition, and after financial ups and downs found themselves each with about $1,500 cash and plans built around the purchase of cheap land and a hewing of success out of virgin country.

Jones tried cutover timber land somewhere in Arkansas. It cost him $20 an acre on the instalment plan, and of his fifty acres only five were sufficiently cleared to permit immediate farming. But he had chanced to locate in the midst of sturdy, broad minded, enthusiastic, progressive pioneers. All worked together clearing one another's land, improving the roads, building simple, comfortable houses, and developing a happy, altruistic social life.

Within five years apple orchards were planted and young peach trees were yielding crops that justified the building of a new railroad line. Meanwhile dairies, poultry plants, and home gardens supplied local demands and sent a surplus to the nearest markets. In ten years Jones belonged to a community whose land had reached an average valuation of $100 an acre. His own home, buildings, stock, and farm were worth altogether about $17,500, and he was clearing annually about 150 per cent. on his original invested capital of $1,500.

Brown started off in much the same way in northern Georgia, but the fates were not propitious. He placed his faith in pecans and the soil proved uncongenial. His strawberry crop rotted in the crates before he could get it over the poor roads to a market or a freight station. His neighbors were shiftless and narrow, and Brown lacked the necessary ability to organize and stimulate them. Attempts at coöperation were rendered fruitless by a lack of subsequent support. Poor farming methods and indifference to available means of improvement led to soil erosion, weed infestation, uncontrolled insects, and plant diseases. The fertility of the land crept down the hillsides into the creeks and away to the deltas of the coastal plains, carrying with it Brown's hopes. For half a dozen years he hung on, fighting the realization that conditions rendered success impossible. Then he gave in and joined the army whose slogan is, "Farming does not pay."

These three experiences illustrate the working of a principle familiar enough to business men, but rarely applied to the complex business of farming. Stated mathematically it is, that in starting an enterprise the return involved is inversely proportional to the risk; and the risks in the case of Brown were many times the risks taken by Smith.

The wealthy capitalist buys high priced, gilt edge securities that pay 5 or 6 per cent., cuts his interest coupons regularly, and, so far as they are concerned, can eliminate worry from his vocabulary. The man with a little money finds these securities far beyond his reach, but often, for less than a dollar a share, he can buy mining stock that may mean either failure or fortune, with the chances largely in favor of failure.

So it is with farm lands. Millions of acres of undeveloped country can be bought for less than $25 an acre and with moderate care can be made to yield good crops. But the success of a farm depends on far more than its crop-raising possibilities. There must be markets, means of transportation, selling agencies, and social development. Without these the property is an isolated unit, no more valuable than the uncleared timber land surrounding it; with them the whole section grows in importance and prosperity. Land values increase automatically, and the moderate investment proves a veritable gold mine. This is a job for a vigorous man. Such a farm is no place to retire to.

If, however, you want safety; if you are content with a small percentage of profit so long as it is assured; and if you have means to insure these results, buy an improved, high-priced farm in a well developed agricultural community. An established reputation, public opinion, and the contagious effect of success will insure financial stability. Such a farm holds out a pleasant profit for old age.

ANSWERS TO QUESTIONS ABOUT FARM LANDS

66.— *Q.* Do you know of any successful farmers' coöperative organizations from which I might get information as to formation, methods, by-laws, etc?

A. In "Coöperation Among Farmers," by Professor John Lee Coulter (Sturgis and Walton, seventy-five cents), in which you will find much valuable information, there are mentioned the following successful associations to which you might apply:

The Produce Exchange of the Eastern Shore of Virginia, Onley, Va.

The Southern Texas Truck Growers' Association, care of the Commissioner of Agriculture, Austin, Texas.

The Producers' Coöperative Market Association, Duluth, Minn.

The Knox County Berry and Truck Growers' Association of Tennessee.

67.— *Q.* (a) What are the water rates in the Salt River Valley of Arizona; (b) can hogs be pastured the year round in the Sacramento Valley of California?

A. Water rates on the United States Reclamation Project are, in summer (from June 1st to September 30th) sixty cents an acre, and, in winter (from October 1st to May 31st), one dollar an acre. From private individuals they are probably higher.

(b) Hogs can be pastured and a large number of crops grown the year round in certain parts of the Sacramento Valley, depending, of course, on the elevation, the latitude, and the distance from large bodies of water which moderate the climatic conditions.

68. — *Q.* Please give me information about Phillips County, Ark. — price of land, its adaptation, etc.

A. Located on the Mississippi River, this section is low, level, and subject to occasional inundation by floods. Danger from this source is extreme only along the eastern borders. Census figures for the acreages of leading crops are: cotton 84,284, corn 25,712, hay and forage crops 4,552, and oats 230 acres.

The elevation of the county seat, Helena, is 182 feet, and the climate of the county is characterized by "long, hot summers, short, moderately cold winters, pleasant weather in the spring and late autumn, abundant sunshine, moderate extremes of temperature, copious rainfall, and high humidity." These conditions, in connection with the rich alluvial soils, offer opportunities for growing rice and fruits as well as the crops mentioned above.

Of the 4,651 active farm owners in the county, 4,185 are Negroes; 49 per cent. of the land is in farms and 66 per cent. of this farm land is improved. The average value of farm land was, in 1910, $27.67 per acre, but in 1900, only $8.48. Good farms, however, can not ordinarily be bought even at the former figure.

69.— *Q.* What is the probable future of the grazing industry in Montana, Idaho, Colorado, and Wyoming?

A. Western grazing methods, always highly extensive and wasteful, have been profitable in the past chiefly because stock could range over an unlimited area and all kinds of land, and obtain water at any stream or water hole. To-day such water sources are practically all appropriated, and the best land has been taken for either irrigated or dry farming. The free or cheap land remaining will rarely maintain many cattle profitably.

The cattle business of the future in the West will probably make use of eastern stock-raising methods involving more limited pasturage and increased feeding of cut fodder and concentrated foods.

70.— *Q.* Where, in Florida, in your opinion, is the best location for the raising of grape fruit? We have a young apple orchard in Michigan and have thought of managing a citrus grove in connection with it, but want to start as economically as possible.

A. Counties producing more than 20,000 crates of grape fruit in 1910 were: Dade 184,012, Orange 69,730, De Soto 53,898, Polk 49,292, St. Lucie 42,585, Lake 35,976, Hillsborough 35,303, Brevard 28,335, and Volusia 26,890. Those receiving the highest prices were, however, St. Lucie, Brevard, and Palm Beach (10,094 crates). All things considered, we should prefer the country just west and southwest of Tampa.

Unless you are prepared to maintain two separate forces of men and to conduct two complete enterprises we do not see the logic of your plans. A citrus orchard is among the most precarious of agricultural enterprises, and we do not think a young apple orchard a sufficient protection against possible loss in a combination of two such activities.

The World's Work

WALTER H. PAGE, EDITOR

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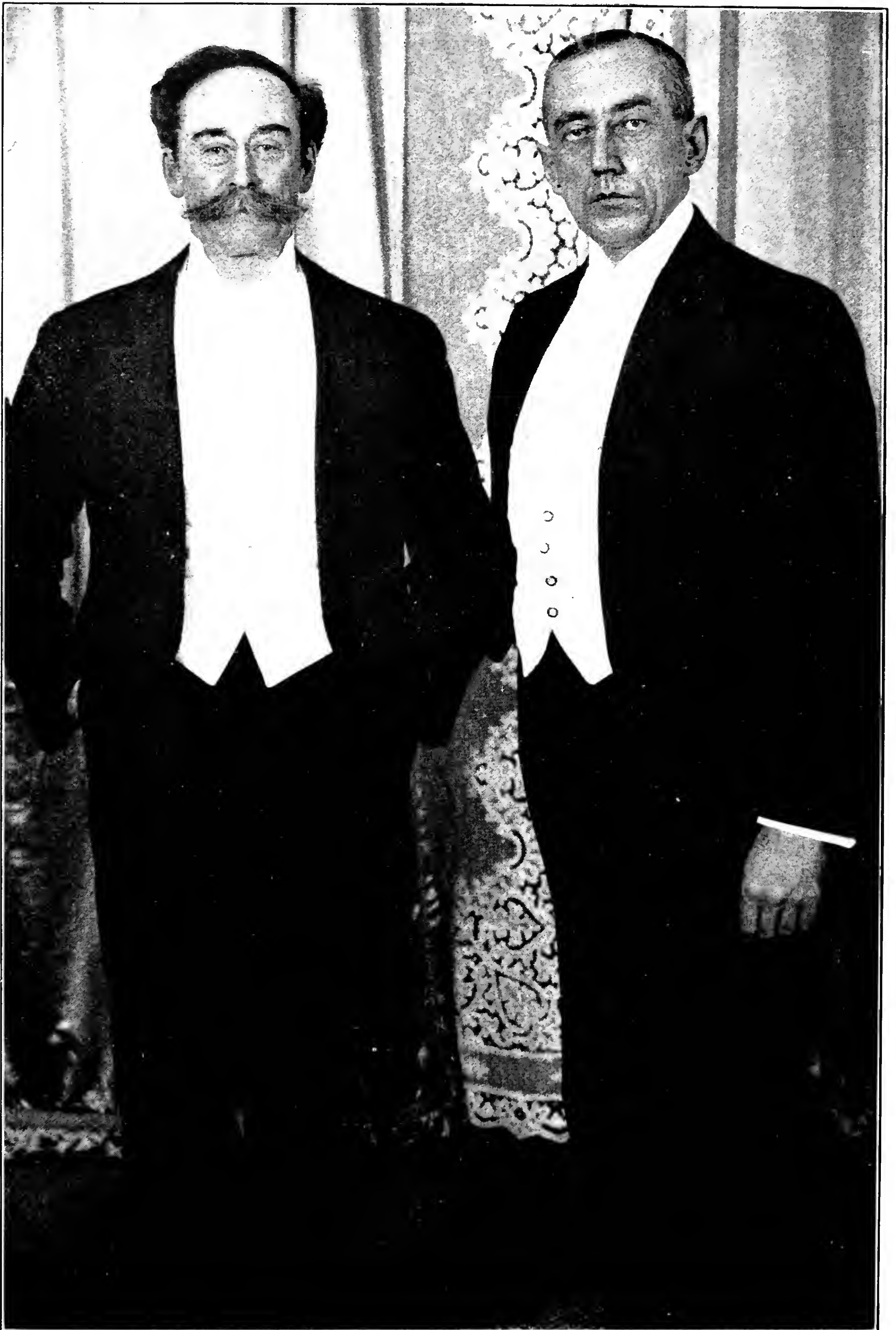

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FROM THE ENDS OF THE EARTH

THE DISCOVERERS OF THE POLES, REAR-ADMIRAL ROBERT E. PEARY AND MR. ROALD AMUNDSEN, PHOTOGRAPHED DURING MR. AMUNDSEN'S RECENT LECTURE TOUR OF AMERICA

THE
WORLD'S
WORK

MARCH, 1913

VOLUME XXV

NUMBER 5

THE MARCH OF EVENTS

AND now comes Mr. Wilson's new era, the era of his "new freedom." It is not merely the happy phrase of a courageous and well-equipped man. It is a brilliant opportunity. With the confidence of friends and with the good wishes of his political opponents, the new President and his old party come into power.

The change was quite due. The moral and patriotic impulse that gave such long leadership to the Republican party became, under many abuses, a spent impulse. The philosophy of politics and of life which the Democratic party stands for, in its right interpretation, is held by quite half our population and it is proper and wholesome that they should find expression and fair trial.

There is no affectation in the new President, but there is a fundamental simplicity of life and even a certain asceticism. Pomp and show are foreign to his nature. His dignity is the dignity of character and an intellectual dignity. And this essential simplicity is going to make a difference in Washington life. He will be to the man who has business with him the most direct and approachable of Presidents and to the merely casual man the most aloof. He regards his office as a serious task and not as a chance for personal conspicuousness.

Most broad-minded men have high hope of Mr. Wilson and many of them have deep fears of his party. It will be well for the country if it succeed, if for no other reason to prove that the art of self-government can be successful when practised by any large group of American citizens and does not belong exclusively to any one party. We are Americans before we are Republicans or Democrats. Our institutions and our political instincts are more fundamental than our partisan divisions.

Holding no brief for any President or for any party, the WORLD'S WORK speaks the true American spirit when it expresses high hope and good wishes for our new masters and confidence in them.

Of course it is the same tough old world which has seen other men enter the White House with high hopes — high hopes that some have realized and that more have seen fade away into the gray day of Things-as-they-are. But in spite of this, ours *is* a new era, an era of a new conscience in business, of a new political accountability to the public, and of a new "call for the emancipation of the generous energies" of the people.

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I. LEADERS IN THE NEW SENATE

SENATOR GEORGE W. NORRIS, THE FIRST "INSURGENT" CONGRESSMAN, RECENTLY ELECTED AS A REPUBLICAN SENATOR BY A DEMOCRATIC LEGISLATURE IN RESPONSE TO THE ADVISORY VOTE OF THE PEOPLE OF NEBRASKA

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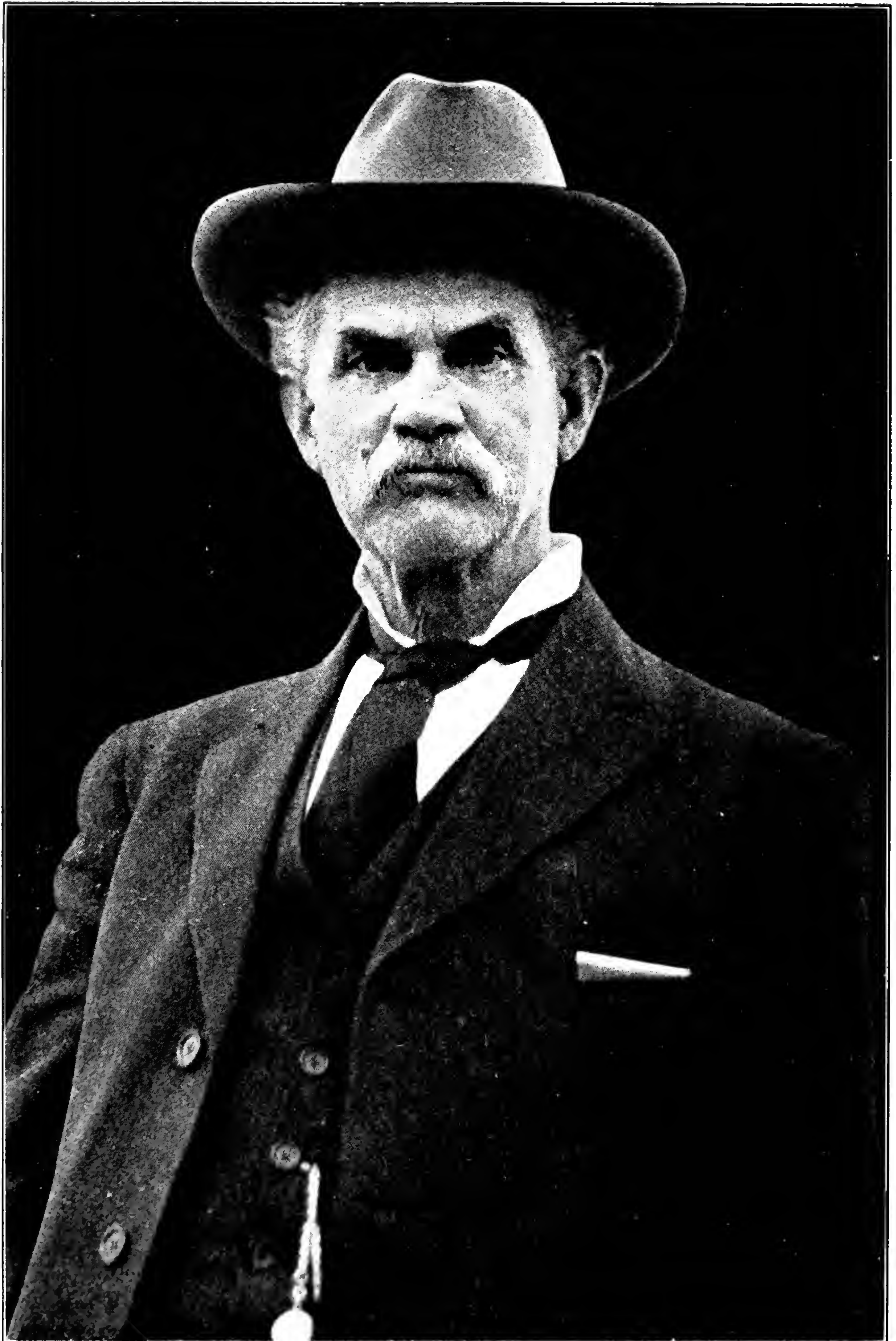
II. LEADERS IN THE NEW SENATE

SENATOR HOKE SMITH, OF GEORGIA, SECRETARY OF THE INTERIOR IN PRESIDENT CLEVELAND'S SECOND ADMINISTRATION AND TWICE GOVERNOR OF GEORGIA



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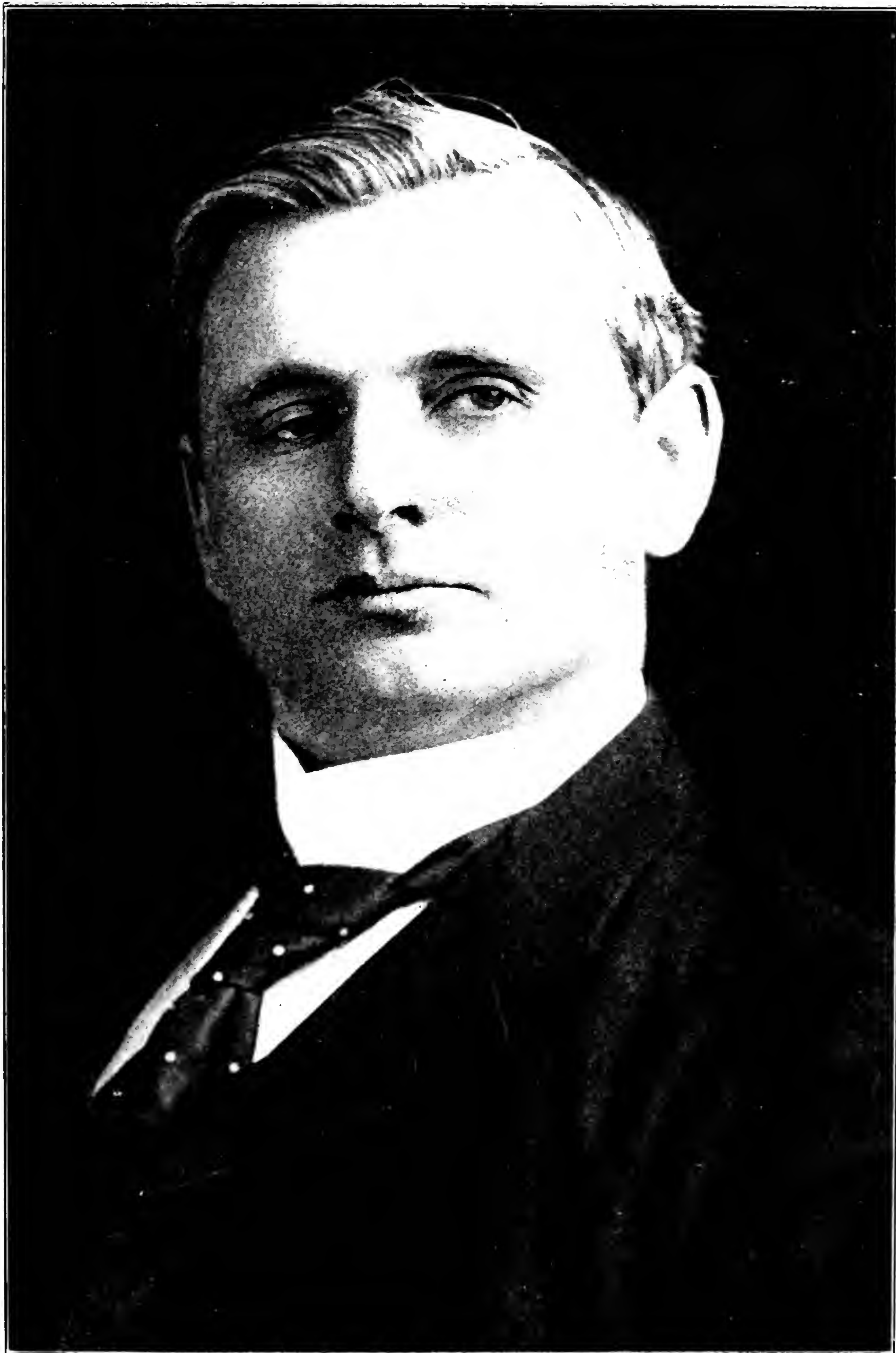
III. LEADERS IN THE NEW SENATE

SENATOR JOHN SHARP WILLIAMS, OF MISSISSIPPI, LONG THE DEMOCRATIC LEADER IN THE HOUSE OF REPRESENTATIVES AND NOW PERHAPS THE MOST BRILLIANT ORATOR IN THE SENATE



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IV. LEADERS IN THE NEW SENATE

SENATOR THOMAS P. GORE, OF OKLAHOMA, A PROGRESSIVE DEMOCRAT WHO WAS ACTIVE IN THE MANAGEMENT OF THE CAMPAIGN

THE NEW PRESIDENT OF FRANCE

M. RAYMOND POINCARÉ (ON THE RIGHT) WHOSE RECENT ELECTION, AFTER A DISTINGUISHED CAREER AS LAWYER, MINISTER OF FOREIGN AFFAIRS, AND PRIME MINISTER, WILL PROBABLY RESTORE TO THE FRENCH PRESIDENCY SOME OF THE POWER IT HAS LOST UNDER A SERIES OF MEDIOCRE OCCUPANTS. ON THE LEFT IS M. FALLIÈRES, THE RETIRING PRESIDENT

[See "The March of Events"]

GENERAL MICHAEL SAVOFF

THE MILITARY GENIUS OF THE BALKAN WAR, WHO CREATED THE EFFECTIVE BULGARIAN ARMY, PLANNED THE CAMPAIGN AGAINST THE TURKS, CONCENTRATED THE ALLIED TROOPS IN A REMARKABLY SHORT TIME, AND DIRECTED THE SUCCESSFUL BATTLES THAT DEFEATED THE TURKISH ARMIES

MR. RUDOLPH BLANKENBURG

THE REFORM MAYOR OF PHILADELPHIA, WHO IN A YEAR'S ADMINISTRATION HAS REDUCED THE COST OF GOVERNMENT BY HUNDREDS OF THOUSANDS OF DOLLARS, HAS GREATLY INCREASED THE EFFICIENCY OF THE FIRE, HEALTH, AND POLICE DEPARTMENTS, AND HAS LARGELY REMOVED THE TEMPTATION TO GRAFT FROM THE MUNICIPAL EMPLOYEES

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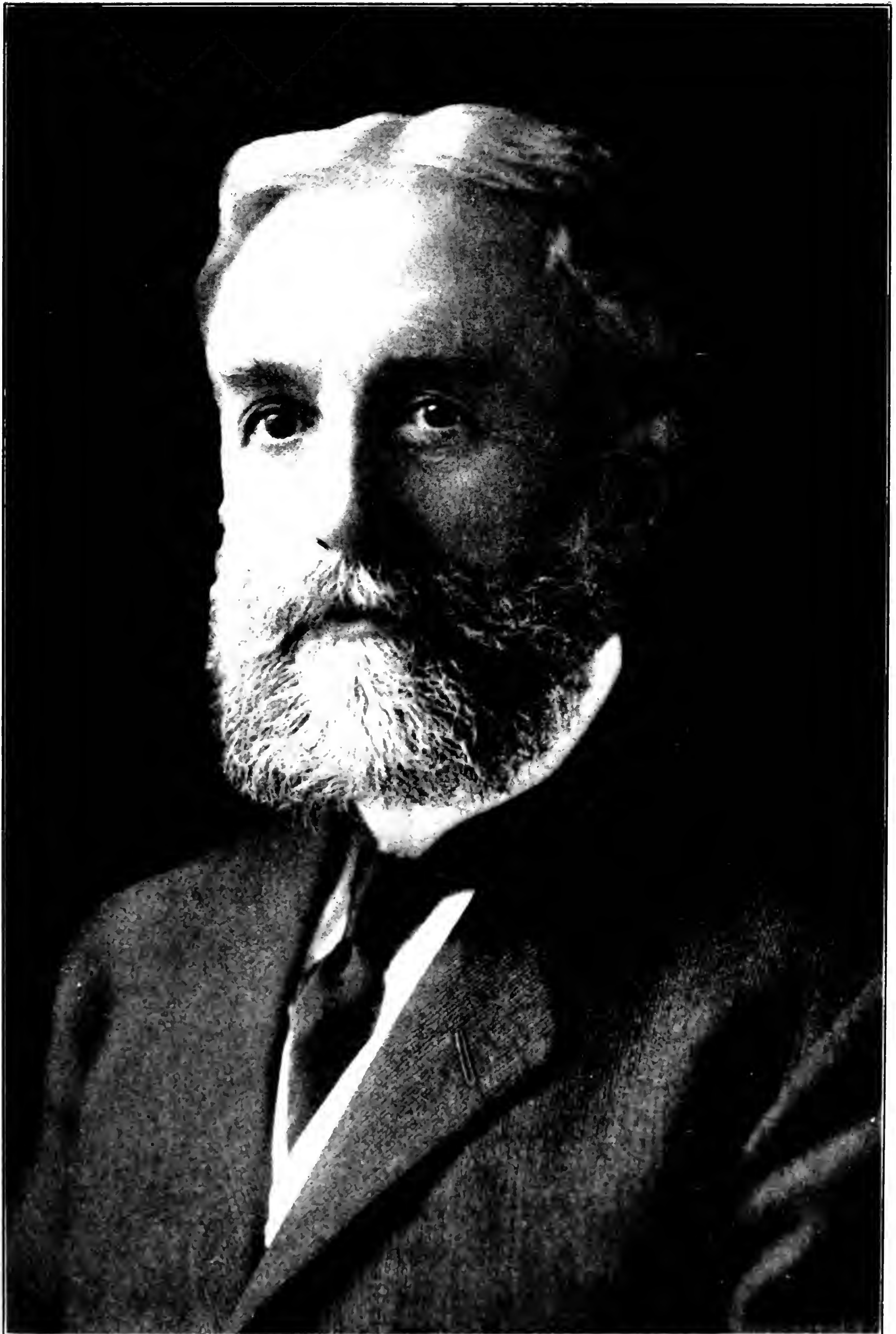
MR. FRANKLIN K. LANE

WHO REVEALS, IN THIS ISSUE OF THE WORLD'S WORK, THE IDEALS AND THE SPIRIT OF THE MEMBERS OF THE INTERSTATE COMMERCE COMMISSION IN THEIR TASK OF REGULATING THE RAILROADS OF THE UNITED STATES.

[See Page 559]

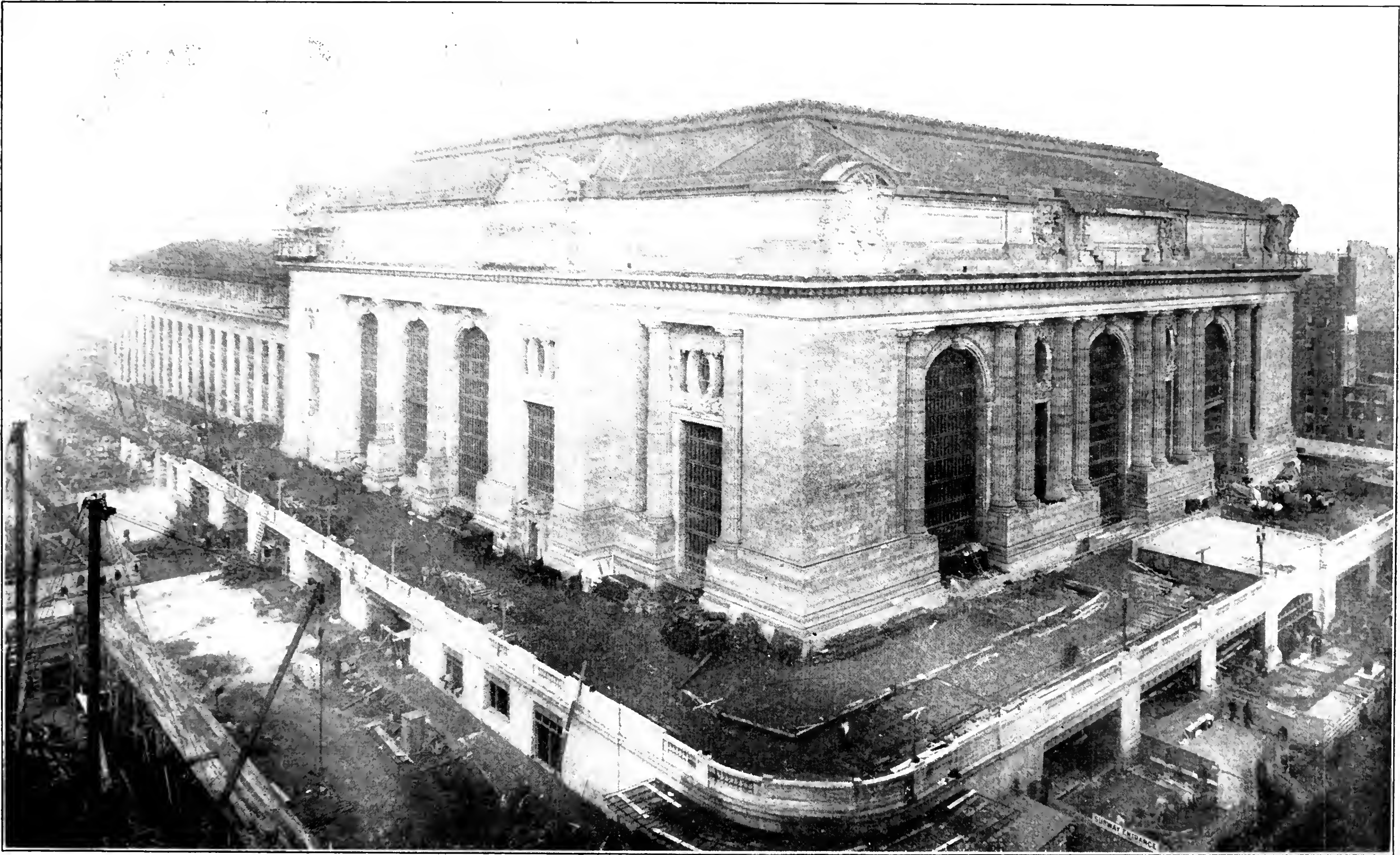
HARRY PEYTON STEGER

THE BIOGRAPHER OF "O. HENRY" AND ONE OF THE BEST KNOWN CHARACTERS AMONG AMERICAN LITERARY CRAFTSMEN, WHO DIED ON JANUARY FIFTH



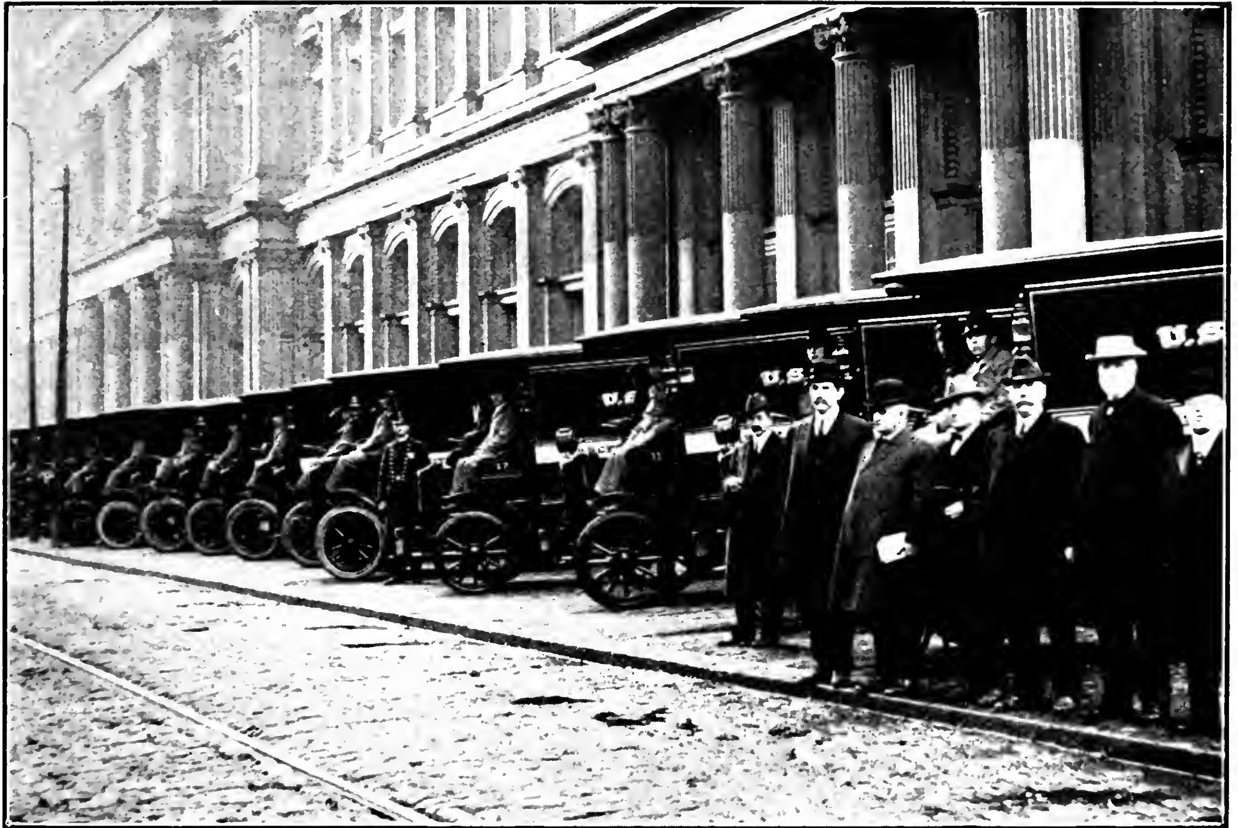
MR. CYRUS H. K. CURTIS

THE PUBLISHER OF "THE LADIES' HOME JOURNAL," "THE SATURDAY EVENING POST," AND "THE COUNTRY GENTLEMAN," WHO RECENTLY ADDED A DAILY NEWSPAPER, "THE PUBLIC LEDGER," OF PHILADELPHIA, TO HIS REMARKABLY SUCCESSFUL PUBLICATIONS



THE NEW GRAND CENTRAL TERMINAL IN NEW YORK CITY

WHICH WAS RECENTLY OPENED FOR PASSENGERS AND WHICH WHEN COMPLETED WILL EXTEND TO THE SMOKESTACKS IN THE LEFT BACKGROUND AND WILL INCLUDE ALL THE PRINCIPAL ACTIVITIES OF A MODERN CITY, SUCH AS HOTELS, OFFICE BUILDINGS, AND DEPARTMENT STORES, MAKING IN ALL PROBABLY THE MOST COMPLETE AND THE LARGEST RAILROAD TERMINAL IN THE WORLD



THE PARCEL POST IN OPERATION

UPPER PICTURE: AUTOMOBILE TRUCKS THAT WERE NEEDED TO CARE FOR THE EXTRA WORK OF DELIVERING PARCELS AT THE POST OFFICE IN PHILADELPHIA. LOWER PICTURE: CLERKS SORTING PARCELS IN THE POST OFFICE IN NEW YORK. IN THE FIRST TWELVE WORKING DAYS UNDER THE NEW LAW 5,004,027 PARCELS WERE HANDLED, AT A SAVING TO THE SHIPPERS OF $547,508.

THE GROWTH OF AMERICAN CITIES

A VIEW IN SCHENECTADY IN 1899, AND SAME VIEW IN 1913. THE CITY'S POPULATION IN 1900 WAS 31,682, AND IN 1910, 72,826, AN INCREASE OF 130 PER CENT.

A LEGITIMATE QUESTION TO WALL STREET

SOME time before Mr. Wilson's inauguration he made several utterances about business and business morals — homilies, one might call them. Surely he made no threats, unless his promise of a figurative gallows for the man who should bring on an artificial panic be regarded as a threat. His several speeches on this subject were rather his expression of a belief that we are come to a time when business methods are to be honester, when the strangling of competition is regarded as a crime, when men in the market-place are coming to understand that their activities are not merely to make money but to do a service to society as well.

This is the kind of business world that Mr. Wilson believes in, the kind that makes for the happier dwelling of men together and a more satisfactory working world — a working and trading world where conscience and a social responsibility and courtesy have play. And he asked the business men who heard him to help toward bringing such a world into being.

What happened? Stocks fell. Wall Street asked, "What does he mean?" It was reported that many large enterprises that had been contemplated were held up till the sky should become clear. This is amusing, but it has its serious side also.

For the sake of argument, let it be granted that Mr. Wilson spoke too often and too vaguely about the business world and the Government. That did not warrant the fear that the Stock Exchange showed. There was a fall in the market price of securities that showed either an absurd fear or a studied warning to him to cease talking.

Now what does this mean? A man, even a President of the United States, might talk ever so much and even ever so foolishly about the book market, or the shoe market, or the lumber market, or the clothing market, yet the book men and the shoe men and the lumber men would not become frightened and sell their property; nor would they "answer back" by "throwing a fit." What is there in the stock and bond market that makes it different from other markets? Why must these men be so delicately dealt with, or always left alone? Is their business in some way sacred? Or does a part of it rest at all times on such an artificial basis that it must have special consideration? Does its success depend on silence?

It is quite time that gentlemen in Wall Street were thinking of the serious side of this subject. The country is thinking of it, they may be very sure.

THE "MONEY TRUST"

THE aim of the Pujo Committee in its inquiry into the methods of the great bankers was to show that there exists a consciously constructed "money trust," which has the power of life and death over the financial world. This has not been proved. But it has been shown that there is a gigantic concentration of money power and a very large control over banking credit. These have come about partly because of the strong men at the financial centre, but mainly because our banking laws permit and invite such concentration of power. It has not been proved that there is a conspiracy, but only that a dangerous condition exists, a condition that permits a few men to wield entirely too much power.

Mr. George F. Baker, one of the powerful New York group of bankers, said of this concentration:

> It might not be dangerous, but still it has gone about far enough. In good hands I do not see that it would do any harm. If it got into bad hands it would be very bad.

Another expression of opinion which gained wide publicity and will probably be quoted for many years to come, was made by Mr. J. P. Morgan:

> I'd rather have combination than competition. I like a little competition but I like combination better. Control is the important thing; without it you can't do a thing, but no one man could monopolize money. One man might get control of railroads or merchandise, but never money or credit.

Still another expression of note came

from Mr. Geo. M. Reynolds, president of the Continental and Commercial National Bank of Chicago:

> I am opposed to the concentration of any sort of power. I believe that concentration to the point it has already gone is a menace. In saying that I do not wish to sit in judgment on the men who hold that power.

The gist of the evidence, then, is, first, that there does exist powerful concentration of financial credit in New York; second, that this concentrated money power has not yet been used as a conscious oppression; third, that in the judgment of some of the leading financial bankers of the country, it has gone far enough and may become a menace.

But there are many facts in high finance that the public does not know. For instance, it has been denied to the Pujo Committee to put the officers of banks on the stand and to cross-examine them about what these banks have done, or to inquire closely into what securities they hold, why they bought them, and what they have made out of them. The law, apparently, denies the public the right to know the inner operations of the banks as such. Whether this be a wise denial or not, it is true that without these records it is impossible to form anything better than an intelligent guess as to the methods, the ethics, and the abilities of the younger group of men into whose hands these great institutions are now coming.

This inquiry has not been free from suspicion of some unworthy motives, but it has had an illuminating effect. It has made it pretty clear that the machinery exists for the concentration of credit, that our laws are very defective, that the pressing duty of the Government is to change them and to devise some plan for the better diffusion of the "money power."

THE SPOILS AND DEFEAT

ON SEPTEMBER 30, 1910, President Taft put assistant postmasters and clerks in first and second-class post offices under the civil service law — an excellent executive order. On October 15, 1912, he put all fourth-class postmasters under the same protection — an equally good executive order, but in this case his motive, since he acted so late in his term, was open to the suspicion of wishing to keep this army of Republican postmasters in their positions. Many Democrats, being very human and very hungry, resent this latter order, and their feeling has shown itself in Congress.

The lesson is hard to learn — that such service as these small postmasters do has no logical relation to political faith; and this other lesson — that the more patronage a member of Congress has, the worse for him. Many a man has been defeated for reëlection because in giving an office to one applicant he was obliged to deny it to a hundred others. This is as serious a danger as any that awaits the in-coming party, in that it may lose the election four years hence if it give rein to its spoilsmen. Nothing else causes so much internal strife.

If Congressmen and every officer of the new Administration realize the literal truth of these statements, which has been proved over and over again, and if they content themselves to allow all the civil service executive orders to stand, the howls of disappointment which will at first be heard all along the line will soon die down. Congressmen and executive officers can go about their proper business, relieved of the unspeakable burden of recommending and of making small appointments; and public life will become tolerable. Mr. Wilson, though a firm believer in party-rule, has given good hints, in his administrative conduct in New Jersey, of his soundness on the merit system.

II

There is, of course, one very serious difficulty with the civil service — the lack of a proper exit for men and women who have grown old or are for other reasons inefficient. There are bureaus in Washington that are veritable old folks' homes. Pension them? Yes, that would be logical and proper; but everybody hesitates about creating a new pension roll when he sees the pension bill of the Civil War larger now than it has ever been — now, when most of the veterans and their widows of

their own generation are dead. We can successfully carry on war; we can do miracles in developing a vast continent; we can preserve social order; we can do more great tasks of civilization than any other people or any other government under the sun; but we have so far been unable to prevent the pension roll for a war of half a century ago from becoming ever larger as the number of its proper beneficiaries becomes smaller. We seem to have no stuff in us to stop this robbery of ourselves by ourselves. Never a President but one has shown the courage or the honesty to question and to veto the fraudulent private bills giving money to deserters. We give money and shut our eyes and run for fear somebody will cry that we are ungrateful, unloyal, traitorous, and whatnot. An organization to promote pensions scares the life out of everybody in authority, without regard to party, from the Democratic Speaker of the House to the Republican President. One President within a recent period, a man, too, who wished to be considered unusually courageous, was found one day by a visitor signing a large pile of acts of Congress. "You know what they are?" he asked. "No, Mr. President, what are they?" "They, sir, are sop, sop to Patriotism, with a big P."

Still, there ought to be pensions for faithful civil servants who have done long and good service. By thus honorably and humanely getting rid of the old, the Democrats can, even in four years, make many changes in the present personnel, without throwing down the bars that keep sheer partisan mobs out.

A SIX-YEAR TERM FOR PRESIDENTS

THERE is a possibility that Woodrow Wilson will serve as President until March 4, 1919.

The House of Representatives is in favor of the resolution that originated in the Senate for an amendment to the Federal Constitution changing the term of the President from four years to six and making him ineligible for reëlection. After being passed by a two-thirds vote of both branches of Congress a constitutional amendment must be ratified by the legislatures of three quarters of the states — at present thirty-six out of the forty-eight.

The public imagination has never become stirred up over the relative advantages of having the Presidential term four years and the President eligible for reelection, or having it six years and having him ineligible. But both the great critics of our Government, De Tocqueville and Bryce, voiced the unfavorable opinion of our present Presidential term that is held by a very large number of thoughtful Americans.

De Tocqueville, writing in 1834, with Jackson's reëlection of 1832 before him, puts the situation very bluntly:

"When a simple candidate seeks to rise by intrigue, his manœuvres must be limited to a very narrow sphere; but when the chief magistrate enters the lists, he borrows the strength of the Government for his own purposes. In the former case, the feeble resources of an individual are in action; in the latter, the State itself, with its immense influence, is busied in the work of corruption and cabal. The private citizen who employs culpable practices to acquire power can act in a manner only indirectly prejudicial to the public prosperity. But if the representative of the executive descends into the combat, the cares of government dwindle for him into second-rate importance, and the success of his election is his first concern. All public negotiations, as well as all laws, are to him nothing more than electioneering schemes; places become the reward of services rendered not to the Nation, but to its chief; and the influence of the Government, if not injurious to the country, is at least no longer beneficial to the community for which it was created.

"It is impossible to consider the ordinary course of affairs in the United States without perceiving that the desire of being reëlected is the chief aim of the President; that the whole policy of his Administration, and even his most indifferent measures, tend to this object, and that, especially as the crisis approaches, his personal interest takes the place of his interest in the public good."

Mr. James Bryce, writing fifty years later, puts the same idea in somewhat softer words:

"The fact that he is reëligible once, but

(practically) only once, operates unfavorably on the President. He is tempted to play for a renomination by so pandering to active sections of his own party, or so using his patronage to conciliate influential politicians, as to make them put him forward at the next election."

And again:

"The founders of the Southern Confederacy of 1861-65 were so much impressed by the objections to the present system that they provided that their President should hold office for six years, but not to be reëligible."

Methods of getting renominated differ somewhat with different Presidents, but it is a fact that no President that has lived out his term of office, except Pierce and Hayes, has been succeeded by another man of his own party until he had obtained a nomination for a second term. A careful study of the succession shows that if his party stayed in power the President could practically always succeed himself if he chose. Mr. Roosevelt as President could even nominate Mr. Taft as his successor as Republican candidate, but Mr. Roosevelt as a private citizen could not prevent Mr. Taft's renominating himself, even after an unpopular administration, and Mr. Roosevelt characterized the condition of affairs which made this possible in language no less severe than De Tocqueville used.

To make him ineligible for reëlection would remove the temptation from a President to work for his own ends, and would leave him free to attend to the Presidency during the campaign for nomination. The six-year term would give the country a longer period undisturbed by national campaigns and would give each Administration a better opportunity to do the tasks which it has pledged itself to perform.

But on the other hand there are distinct disadvantages to the proposed amendment. Half way through Mr. Taft's Adminstration, he had ceased to represent the will of the electorate. To have continued his Administration in office for four years after such a landslide as gave the House of Representatives to the Democratic party would have been a travesty on popular government. Six years is too long for a President who is out of sympathy with the people who elected him. But for a man who is doing his great task well, six years is too short a term. Our history shows that we as a people believe this, for we have reëlected nine Presidents and refused to reëlect the same number.

But perhaps the greatest objection to the proposed amendment now is that it cannot be decided upon its general merits but must necessarily be fought out upon its bearing upon the length of Mr. Wilson's Administration, his eligibility to reëlection, and the eligibility of Mr. Roosevelt for another term in the White House.

THE INCOME TAX AT LAST

BUT, though difficult, to amend the Constitution is not impossible. Thirty-six states have ratified the amendment to the Constitution allowing the Federal Government to levy a direct income tax. This amendment comes at a particularly opportune moment for the new Administration, for an income tax bill is a logical complement to a tariff-reduction programme.

The tariff taxes people with small means a far greater proportion of their incomes than people of large incomes. A straight income tax collects from all proportionally, and the graduated income tax takes more proportionally from the rich than from the poor.

The extra session will probably take advantage of the amendment immediately to pass an income tax bill to make up any loss in customs revenue that the new tariff schedules may incur.

TO ENLARGE THE SUPREME BENCH

SENATOR GORE, of Oklahoma, has introduced a bill in Congress to increase the Supreme Court of the United States from nine to eleven members. The Court at first had six members and it has been and may at any time be increased as Congress sees fit.

The enormous volume of the Court's business doubtless justifies an addition to the number of justices. But another rea-

son for this proposal is suspected—that the number of "Democratic" members may be made larger, members whose general interpretation of the Constitution is Jeffersonian rather than Hamiltonian, or members who are "progressive" in their temperaments. Assuming that the new justices who would be appointed are men of learning and of character, there is no good reason to quarrel with such a motive. For even on the Supreme Bench there is room and even need of such diversity of views and of temperaments as will keep the Court contemporaneous with the people whom it serves.

TARIFF TALES RETOLD

LAST year Congressman William C. Redfield, of Brooklyn, N. Y., demolished a favorite argument of the high protectionists by pointing out that "the difference in cost of production at home and abroad" was a mere catch-phrase because high wages do not necessarily mean high labor cost, for a highly paid American laborer may — often does — produce enough more than a cheap European laborer to make up the difference in wages and more. The newspapers gave Mr. Redfield's acute observation much attention, as it deserved; and Mr. Wilson quoted his argument with great effect in the campaign.

Forty-eight years ago Arthur Perry, professor of history and political economy in Williams College, published his "Elements of Political Economy." He showed that high wages do not necessarily mean a high labor cost, because the cost of labor is the net result of the wages compared with the efficiency of the laborer and the dearness of the money in which he is paid.

In other words, Mr. Redfield independently rediscovered an idea that was forgotten about thirty years ago. This is another example of a curious truth: that with perhaps two exceptions, every argument that was made for or against the tariff in the last campaign was made by somebody before 1837. In the clash and excitement of to-day's affairs, we sometimes forget that the tariff was an issue a hundred years ago.

For examples: just after the War of 1812, Samuel D. Ingham began bidding for the "farmer vote" for high tariffs by declaring that protection would assure a home market for the products of agriculture. In 1816, Thomas Telfair, of Georgia, introduced an argument against protection that is in good use yet, namely: "Revenue will be transferred from the consumer to the manufacturer, and will be paid by the people not to the Government but to individuals." The Congressional debate on the tariff in 1823 brought out the familiar argument that protection would destroy competition and would give great capitalists a monopoly, thus putting the wealth of the country in few hands; and the counter-argument that protection, by making manufactures stable, would attract capital, multiply factories, and thereby promote competition. In 1824, Henry Clay favored protection because it would build up home markets for the manufacturers.

In 1840, about the last original argument on the tariff was invented. The protectionists of 1812 had praised high tariffs because they would protect capital against the exorbitant demands of labor. In those days laborers in some states had no votes. In 1840 nearly everybody had votes, and Horace Greeley was bidding for them for protection because protection would defend the laborers against European competition.

No doubt we shall hear much oratory and some arguments on the tariff in Congress after this month. Studious men will find interesting exercise in re-reading their histories of economics to learn whether these many words are shedding new light on an old subject or whether they are merely new clouds obscuring the face of the old truths.

WHAT REAL WEALTH IS

IN WRITING about the causes of the high cost of living, a very thoughtful correspondent closes his letter thus:

From the door of your establishment to the farthest part of the country, real estate developments are laid out and others promised — enough to house a population of 200 millions.

The losses will be enormous, and they will fall mainly on those who can ill bear the burden. Almost every tenth man has an interest in city lots, in rubber plantations in Central America, in pecan orchards in Georgia, in French gardens in Louisiana, or in cut-over timber lands in Mississippi.

This, of course, means speculative investments in land; and it is true. Worse yet — much of this activity is as much a game of chance as the buying of lottery tickets; for the buyers have never seen the property that they have invested in. Any man who buys land or an interest in land that he has never seen is (to use language of great self-restraint) a fool. Yet these purchases put prices high and for a time keep them high and add to the cost of living and of dying. It is a rise in apparent or temporary values that is not any real increase of wealth, but only a speculative increase.

If there were a way to divert this dangerously spent money to the improvement of agricultural lands, it would make a great increase in real values and add definite wealth to the country. But the speculator and the promoter do not plow the ground and sow wheat or plant corn or cotton nor reap them nor add food and clothing to the world's supply. And these are the only uses of the land that surely make living cheaper and life happier. If you would put your life on a sure economic basis that will stand the test of time, put money into the enrichment and the improvement of land on which things of value grow. Moth doth not corrupt *that* nor can thieves break through and steal; nor can change nor circumstance nor panic take it away

ABOUT PAYING FOR SCHOOLS

THERE has come to this office a long and earnest letter from an educated and zealous man saying that he simply cannot understand why the WORLD'S WORK thinks it unwise for the National Government to make appropriations to the public schools, agricultural or other. There are, of course, several reasons. But one is given in this bit of news from Wisconsin:

The State Board of Public Affairs made an investigation of rural schools — this, in Wisconsin, remember; and a part of its report follows:

"Two schools in one township were held in private homes. In both cases the schools were attended by one family only. In each case the school board paid to the owner of the house $12 a month rent for a room to school his own children, $5 a month for fuel for heating this room in his own house, and $5 a month janitor fee for cleaning this same room.

In addition the family received $16 a month for boarding the teacher. In one case the school room was in an attic but it was clean and tidy. The teacher used it as a sleeping room. But one pupil was enrolled. In the other case two pupils were enrolled. The school room was in a log house which was filthy, dark, and dingy. The room while used for school purposes was used by the family as if no school was there."

The WORLD'S WORK is informed that there are neighborhoods in New York where a similar misuse of school funds has been going on a long time.

Now these are not typical of the schools in either of these states; but they are typical of the misuse of public money without proper supervision and local responsibility everywhere. The key to the proper supervision of rural schools is, of course, the county superintendent. If there be no proper supervision of this sort, these pious frauds are most likely to happen. Everybody knows, for example, how many of the colleges to which the National Government made a grant to teach agriculture, for many years used this fund to pay for ordinary academic instruction — in several instances to pay professors of Greek! There was not proper supervision of the fund. There is seldom proper supervision of a fund that comes from a distance. As a rule, the farther public money goes to be spent, the more likely it is to be misspent.

II

Of course there are other and more serious objections to the National Government's making appropriations to schools. One is, where is the money to come from? The Government now costs about a billion a year — $10 for every man, woman,

and child. To have any effect on our wide area, an educational scheme would cost many millions a year.

There are other objections also. But perhaps these are enough to show that there is room for at least an honest difference of opinion, without warranting the accusation of an indifference to education. In general, it may be said that no people or community is ever educated by a superimposed activity. Persons from a distance may show them how. But they themselves must do the work and must—pay the bill.

"GOOD BUSINESS" AND FAR-SIGHTED

A BANK in Grenada, Miss., offers to lend to any farmer who will buy land to cultivate within seven miles of the Grenada court house as much as three fourths of its value and to lend on a residence built on such land as much as half its cost, for five years at 4 per cent., with the privilege of renewal for five years at 5 per cent. The same bankers make the same offer at other towns in that state.

A farmer, therefore, who goes there will need of his own cash only one fourth of what his land will cost and one half what his house will cost.

Assuming that the land is fertile and that there is no hidden real estate "boom" in this offer, it is both fair and generous, and it is not "philanthropy." A good farmer can earn this interest and make enough to pay the debt in less than ten years; and the banker can afford to lend money at this rate if he be, as he evidently is, a wiser man than to wish to get rich quick. For he will build up a profitable patronage for his bank for a long time to come as he builds up the country round about him. It is "good business."

But it is more than that: it is wise and sound and generous business. For the lender pledges his faith and his future as well as his money to this land — to his own community and to his own people. His money does not go away from home nor into speculation. It goes where it will do a service, on sound economic principles, that a man will be glad to have done when he comes to lie down to die.

THE FRENCH PRESIDENCY

RAYMOND POINCARÉ becomes the ninth President of France since the establishment of the Republic in 1871, after the fall of Paris before German arms. The length of term created by the Constitution is seven years, and during the forty-two years of the Republic's existence, its Presidents have actually served on an average six years each. First came Thiers, who was forced to resign; then MacMahon, who also had to resign; then Grévy, who resigned during his second term; Sadi-Carnot, who was shot by an Italian anarchist; Casimir-Périer, who resigned mysteriously after a few months; Faure, who died mysteriously in office; Loubet, and finally Fallieres.

It was intended that the President of France should govern, and Theirs did in fact reign until a reaction against his dictatorial conception of his office led to a coalition in the National Assembly that drove him from his seat. Marshal MacMahon was a curious combination of strength and incompetency, and his resignation also was exacted. With MacMahon's fall the principle was established that the National Assembly (which chooses the President), and not the President himself, should be the seat of authority. Thenceforward, at least until the present day, the history of the French presidency has been a catalogue of inoffensive men without strong opinions, or at least without the ambition to assert them.

Raymond Poincaré is a type of man to which the office has not been entrusted since the days of Marshal MacMahon. He was far more powerful as Premier than he will be as President — unless he alters the tradition of the presidency. He will indeed appoint Premiers, but he will be expected to appoint the obvious choice of the National Assembly. He will nominally choose Cabinets, but actually he will be the servant of his Cabinet. His part in the governing of France will be to give official stamp to the acts of his ministers. Certainly, he may refuse to obey his ministers, and they will resign — but only to give way to another set who in turn will exact the President's acqui-

escence in their acts. Thus, MacMahon had eight Cabinets and had to resign because he could not form another. Grévy, with the *éclat* of election to a second term upon him, gave up the struggle because, having tried twelve sets of ministers, he could not gather another set.

The later Presidents have been wiser — and weaker; they have accepted their limitations. Fallieres was the merest figure-head; bucolic, close-fisted, unaspiring, he drew his $120,000 a year for seven years, saved most of it, performed a few formal functions, and let the Government run its course without suggestion of interference from its titular head. Poincaré can hardly relapse into a Fallieres or even into a Loubet. But if he attempt to make the Elysée Palace a seat of power, if he attempt to recover the great authority which the Constitution confers upon the President but which has been usurped by the Cabinet, he will have to calculate against the fact that in France the President is the creation and the servant of the French Assembly, and not of the French people. His only hope would seem to lie in finding a way in which to make a direct appeal to the nation, to the people. By reputation, France's new President is of the stuff to attempt such a thing.

A MORE USEFUL PUBLIC LIBRARY

THE Free Public Library of Newark, N. J., has developed a new field of practical utility; and Mr. John Cotton Dana has given a broader scope to the office of librarian.

The library appeals to the city's business man — as business men, not as readers of literature, but as practical users of every printed thing that can help them to make better things more cheaply and to find new markets. And it is helping them to hold trade in Newark.

"Where can I buy a golf club?" John Smith, busy merchant, asks the library over the telephone; or perhaps it is a load of coal, or a pair of gloves. And at the other end of the wire the young lady at the Business Branch, which is in the heart of the business section of the city, tells him where to get them — in Newark.

For she has consulted the "Made-in-Newark Index." This idea had been in Mr. Dana's mind for some years. Newark is essentially a manufacturing city. In June, 1911, letters were sent out by the library to 2,100 manufacturing concerns in the city, asking for either their catalogues or a description of their products. In a few weeks practically every manufacturer was indexed alphabetically under every kind of goods that he manufactured. Then the Board of Trade took up the idea and gave it financial backing, and soon the list will be distributed broadcast.

Mr. Dana is dissipating the once prevalent idea that a library is a mere repository for books "for men who read novels and nice old ladies who read Shakespeare." He is proving that a library can be maintained for more than the book-reading public. He invites its patrons to ask practical questions of every day life; and they are accepting his invitation — from the publicist who asked for a list of books and magazine articles on coöperation to the lady who wanted "some information on the cultivation of mushrooms." The library answers more than 1,000 questions every day. The deciphering of a cablegram is often a tedious task. The Business Branch does it quickly and cheerfully. Mr. Dana says:

> Lots of people think the library is a place where they can get the latest novel or book of travel. But they don't think of asking how to make hair tonics, or to plant poppies, or to choose the best story books for their children, or to find the position of planets in 1914, or the value of the grosbeak to farmers, or the best hotel to stop at in Detroit and its rates. Yet the library can answer all these questions.

The City Plan Commission, appointed in June, 1911, and of which Mr. Dana is a member, engaged experts to recommend changes in streets, the routing and extension of trolley lines, and other plans to improve Newark. To awaken the interest of the people the Commission has installed a City Plan Exhibition in the library building, and here are shown maps, charts, photographs, etc., gathered by the experts. The library publishes a monthly house organ, *The Newarker*, edited and largely

written by Mr. Dana himself — a dignified and readable publication which not only explains the library's resources but which discusses, also, current municipal topics of interest to the people.

Mr. Dana is making the Newark Library render a new kind of service, and he is setting an inspiring example which public librarians in other cities might emulate with profit to their people.

SINGING COUNTRY FOLK INTO THEIR OWN

This rings true:

I am the minister of a country church and I am enthusiastic regarding the enriching of country life. I herewith submit to you a paragraph. I know Ontario rural life well. I am a farmer's son. I am a graduate of Queen's University. I have taught a rural school.

And this is the paragraph:

Country people used to sing a great deal more and a great many of them used to sing better than they do now. At a husking-bee or a logging-bee it was no unusual thing for the evening to be spent in singing songs or in dancing. The dancing is still with us, though it is a great deal more formal than it was in the old days. The singing seems to have quite vanished, and more's the pity. In the earlier days nearly every township, during the fall and winter months, had its singing school. Only pleasant memories remain of the old-fashioned singing school. Singing was the one form in which art was studied then and, in many cases, it proved to be the gateway to better things. It did a great deal to redeem the necessarily narrow life from sordidness.

There are now scores of young people who would be benefited by attending just such gatherings. They have talent, but the conservatory is out of the question. There are others who can sing well but who do not feel justified in spending the time or the money to enter the ranks of the professionals. It is refreshing to learn that there is in some places a revival of this old-time means of culture. It will make the rural church a better place to go to and more men will sing at their labor, and that means not only more work and better work, but more happiness and contentment.

This is as true in the United States as in Canada. The interesting question obtrudes itself: How did it happen that the country singing school went out of fashion? Has country life these thirty or forty years not merely stood still? Has it declined?

More important, however, is the fact that singing, like many other good social customs, seems coming back into fashion.

SAVING THE WASTES IN CHARITY

THE Waterloo, Ia., Association of Charities and Corrections directs all the private charities of the city by a single body of citizens, and makes the County Overseer of the Poor its sole disbursing agent. The system has been in operation five years, and it shows advantages in operating economy and directness in obtaining effects of much merit.

One half of the board of fourteen directors of the Association are elected every year at a meeting of delegates representing the hundred and more churches, civic organizations, and fraternal orders of the city. The Overseer of the Poor is an ex-officio member of the board and superintendent of the Association. He receives a salary of twenty dollars a month from October to April inclusive, and ten dollars a month during the rest of the year. He responds to all calls for assistance, charging, by the authority of his office, to the county the expenses that justly belong to it, and checking upon the treasury of the Association for needful help that is not chargeable to the county. This arrangement places at the right moment the only agent who can immediately decide whether he is dealing with a county case or not, and who under all contingencies can furnish prompt relief. The superintendent gives the nurses of the Association enough money to provide food, fuel, and shelter for not more than twenty-four hours for persons in urgent need. The nurses are required periodically to visit the residence of every county charge to investigate the sanitary conditions and to enforce rules of proper living. For this work, and other necessary services, the county contributes a fair remuneration to the funds of the Association. The superintendent may give store credit to persons temporarily out of money and unwilling, or not en-

titled, to take aid from the county. This is comparatively safe because the recipient of favors can look only to one source of supplies. The concentration of working forces makes it easier to compel owners to prevent overcrowding and insanitary practices in their tenements.

The system makes practicable an Association store that solicits from charitably inclined citizens used stoves, beds, bedding, furniture of all kinds, shoes, hats, and clothing. Much of this material is given to the dependent poor, but the larger part is sold, at a price just above the cost of handling, to those upon the border line of county support. About five thousand pieces were so handled last year at a net profit of more than five hundred dollars. The store is also a centre for packing and distributing holiday baskets and presents, a depot for articles contributed by needle clubs and other helpful organizations, as well as for broken but wholesome food contributed by bakeries. Here, also, are sold rugs made by women perilously near the poor house.

The actual, not per capita, expenditure of county money in Waterloo through the Overseer of the Poor has increased during the last five years only 2 and one fifth per cent., though the population of the city increased 47 and one half per cent., and the outlay on other paupers outside the County Farm and Waterloo has increased 30 and one fourth per cent. This saving has been accomplished through greater efficiency in management of the furtive pauper, and through measures to prevent pauperism. Since the store was established the county expenditure for clothing has been reduced to the amount that was bought when the city, now of thirty-two thousand people, had only five thousand inhabitants. As the profits from the store very comfortably cover most of the services of the superintendent, as well as all incidental expenses of management, money contributed to the Association may be directly applied to the purposes for which it is subscribed.

Six committees are maintained in the Board of Directors, namely: the House or Store, Finance, Nurse, Holiday, Red Cross, and Publicity committees, and through them the needs of the poor and distressed are made known, and facilities for correct giving are proposed. For example, at the suggestion of the Holiday Committee donations of pennies, vegetables, jellies, bread, etc., for a Thanksgiving offering are made yearly by the public school children. Christmas baskets and presents, to which the whole community is invited to contribute, are handled by this committee. The holiday donations at church services are large. The Red Cross Committee, through the sale of stamps, has money to buy portable houses for the use of needy tuberculous patients. In these and other ways the Association stimulates charitable impulses and promotes in all classes of society a desire to assist in giving comfort to those who are in need of help.

Thus Waterloo has overcome a common difficulty in poor relief — the duplication of effort by private charities and by public officers — and has become efficient in the prevention of pauperism as well as in the mitigation of the sufferings it causes.

THE INCREASING PLAYGROUNDS

THE children of the city will play — in the streets, to their own physical and moral danger and the inconvenience of their elders, if no places but the streets are provided. When playgrounds are provided, they take to them with avidity, to the great benefit of the whole community.

And the playgrounds are being provided. The last yearly report of the Playground and Recreation Association of America tells about forty cities that had opened supervised playgrounds for the first time. Forty-eight cities are using their schoolhouses as recreation centres. There are in all about 533 cities that are making some effort to give the child a place to play.

Nineteen cities in the last year authorized the sale of nearly four and a half million dollars' worth of bonds for recreation purposes, and two and three quarters millions of dollars were expended for the administration of playgrounds.

The public purse is opened to keep the children off the streets. For example, in

Milwaukee, Wis., by a vote of the people the school board has the power to levy a special tax of two tenths of a mill for evening recreation centres. And private philanthropy keeps pace with the public expenditure. Within twelve months twenty-one cities received playgrounds from private individuals ranging in size from 20 acres in Philadelphia valued at $330,000, to 5 acres in Brokenbow, Neb.

Although the realization of the necessity of playgrounds is widespread and has arisen all over the land, the Playground and Recreation Association of America, with its magazine, its field secretaries, and its constant agitation has done much to encourage and quicken this very useful movement, and it deserves all success. For playgrounds and the recreation centres stand ready to draw the city children back from the dangers of the streets and careers of petty crime, which lead through the police courts and reformatories to hardened criminality and a tax on the community.

A STORY OF VACANT-LOT GARDENS

THE Garden Club of Minneapolis two years ago began vacant-lot gardening. In 1911, the city gave the first two weeks of July to a civic celebration of the linking of two park lakes by a canal. Mr. L. J. Boughner, the president of the Garden Club — which was then promoting school gardening — asked for an appropriation of $4,000 to decorate the vacant lots. The celebration committee granted the money and the Garden Club announced that for $1 the club would obtain the use of a vacant lot, plow and harrow it, give vegetable and flower seeds and plants for a family of five, provide gardening instruction and supervision through the season, and distribute prizes for the best gardens.

After a month's campaign, 302 applications for membership were filed, and at the opening of the season sixty acres were under cultivation. The crop was worth $12,000.

The next year, 1912, members of the Garden Club cultivated 150 acres of land in 1,283 vacant lots, and raised vegetables that were worth more than $60,000. Flowers were planted at the front of every garden; the area thus used was more than seven acres. The gardens each cost only about a fifth as much in 1911.

The gardens were treated as a civic and not as a philanthropic enterprise. Everybody who helped was helping to beautify Minneapolis. If, incidentally, he raised enough vegetables to supply his family, that was merely an earned reward for helping the city. Rich men claimed their reward just as eagerly as poor men. However, nobody felt that he was being patronized or made an object of charity. As a dollar for membership and another dollar for tools were the only expenses, and as the average value of the crop was $40, nobody was too poor to join.

Getting the consent of owners to the use of lots has wrecked many garden clubs. The Minneapolis club doesn't get their consent: it just takes the lots and goes ahead with the gardens. Very few owners object, and most of them are quickly convinced that the added beauty of their lots is an advantage. Irreconcilable owners cost the Minneapolis club just $26.40 in 1912.

One woman in Minneapolis induced the families of seven boys in her neighborhood to apply for gardens. In 1912, she got sixteen boys to join the club and paid the fees herself. Another woman in one of the better parts of the city invited Mr Boughner to meet some of her neighbors at a garden party in August, 1911. One of them was a Jew, one a Norwegian, two Germans. None of them had known any of the others at the beginning of summer. But when she began work in her vacant-lot garden in the spring, the neighbor women came out to watch her progress. A night or two later their husbands joined the group. By August these ten people had become close friends.

The vacant-lot gardens of Minneapolis have kept many boys at home, have aroused a new sociability in many neighborhoods, have earned many needed dollars, have made many men and women healthier, and have added much beauty to the city streets. The cost has been insignificant and the returns very great.

PRESIDENTIAL INAUGURATIONS AT FOUR CRISES

THE SCENES THAT ATTENDED THE SWEARING-IN OF WASHINGTON, JEFFERSON, AND LINCOLN RECALLED — HOW WILSON WILL TAKE THE OATH OF OFFICE

BY

WILLIAM BAYARD HALE

"IT IS done!" exclaimed Chancellor Livingston, turning to the people; "Long live George Washington, President of the United States!" A shout went up from the throng. A flag broke out from the staff on the roof of Federal Hall, a cannon boomed, then was echoed in a score of roaring salutes, while the bells of a dozen churches burst into a merry quarrel. Long years of political chaos, of uncertainty and weakness under the Confederation, were past. The Federal Union had been brought to a happy birth, and the idol of the people had taken his place at the head of a new and hopeful Nation.

The circumstances surrounding the inauguration of Washington are perfectly well known. Provision had been made for starting the new Government on March 4th, but not until April 6th had a quorum of Senators and Representatives assembled in New York (the designated capital) and the electoral votes been formally counted. "With feelings not unlike those of a culprit going to the place of execution," Washington started from Mt. Vernon on April 16th, reaching New York on the 27th, at the end of a journey that had been a triumphal progress. He was met at the water's edge at Elizabethtown Point by a committee of Congress, entered a gaily decorated barge rowed by thirteen captains in white uniforms and, accompanied by happy-hearted water-parties, was conducted to Warren's Wharf, near the foot of Wall Street, where he was met by Governor Clinton and other distinguished citizens, being then driven to the house that had been prepared for the President on Cherry Street in Franklin Square.

The morning of April 30th was ushered in by the pealing of bells and the booming of cannon. Shortly before noon, committees of the Senate and House of Representatives of the United States waited upon General Washington and informed him that all was ready for his inauguration. An imposing military escort, with the new President's carriage drawn by its four white horses, passed in procession from Franklin Square to the new Federal Hall. This had been the old City Hall of New York and had now been transformed, at a cost of $32,000 contributed by New York gentlemen, into a temporary home for the Government. It stood on the corner of Wall and Nassau Streets now occupied by the New York Sub-Treasury. The statue now standing on the Sub-Treasury steps rests on a stone declared to be that pressed by the foot of Washington as he took the oath. Federal Hall was a building described as of Tuscan design, with a portico supported by four Doric columns.

Arriving here, the President-elect alighted and, attended by his bodyguard, repaired to the Senate Chamber, where Congress had gathered. The Vice-president, Mr. Adams, met him at the door. Then all proceeded to the balcony, where, before a great assemblage of the people and in sight of hundreds crowded on adjacent balconies and roofs, General Washington took the oath of office administered by the Chancellor of the State of New York. Vowing that he would faithfully execute the office of President and, to the best of

his ability, preserve, protect, and defend the Constitution, "So help me God!" — President Washington kissed the Bible (a copy still carefully preserved) and bowed his head for a moment. Attended by the cheers of the populace, the actors in the notable scene then proceeded to the room of the Senate, where, so moved that he "several times could scarce make out to read," the new President delivered his inaugural address. Then all repaired to St. Paul's Chapel, where they listened to a sermon by Bishop Provoost. Mrs. Washington had remained at Mt. Vernon and did not see her husband inaugurated.

That was in 1789. Twelve years later a great change had come over the spirit of the country. The confidence with which the Federal Government had been founded, with Washington in the chair, had given way to profound distrust. The Father of his Country had now retired from the burdens of office. There had been a second inauguration — if a ceremony in which all eyes had been bent upon the retiring President could be described as the inauguration of his successor. That had taken place in Philadelphia in Congress Hall, Washington in black velvet with a dress sword on his hip; Adams in gray, very elegant, until the ruffles of his shirt and wristbands were wetted by the tears which, in common with all the audience, the incoming President shed at the solemn words and mien of the revered Washington.

Yes, a change had come over the spirit of the country as the nineteenth century was dawning. The people feared the power of the Government. Indeed, it had been too much Hamiltonized, had been tending too strongly toward aristocracy, but, from the most sympathetic understanding we can have of the apprehensions of the Democrats who followed Jefferson, we to-day can form no conception of the depth of their fear and the bitterness of their resentment of the Government as administered by the Federalist Party. The Democrats were in the majority in the Nation, but they had not been able to elect a President, under the electoral system as it then worked, and it was only now, by a contest carried to the House of Representatives and won there, that there had been accomplished what they held as the salvation of the land, a new birth of freedom — the election of Thomas Jefferson to the Presidency.

The evening of the 4th of March, 1801, was celebrated throughout the country like another 4th of July. Everywhere the bells rang, cannon boomed, parades marched, orations were delivered, and dinners partaken of. Throngs made their way to churches and listened to the reading of the Declaration of Independence and heard patriotic sermons. Democratic newspapers that day printed the Declaration, as if it had just gone into effect.

But what happened in Washington?

For many years the school histories have related with curious uniformity how Mr. Jefferson, on the morning of the 4th of March, 1801, mounted his horse, rode to the Capitol, dismounted and, unassisted, hitched his horse to the fence.

As a matter of fact he did nothing of the kind. He had been living in a boarding-house only a few paces from the Capitol and he walked the short distance, attended by a number of friends. The ceremony, which took place in the Senate Chamber, was one of dignity and impressiveness, and the taking of the oath was announced by the salute of cannon.

The legend of the lonely horseback ride originated in a paragraph contained in a book called *Travels in America*, published in London in the year 1803, written by John Davis, an Englishman who happened to be on a visit to the United States. The paragraph runs:

> The politeness of a member from Virginia procured me a convenient seat in the Capitol; and an hour after, Mr. Jefferson entered the House, when the assembly of American Senators rose to receive him. He came, however, to the House without ostentation. His dress was of plain cloth and he rode on horseback to the Capitol without a single guard or even servant in his train, dismounted without assistance, and hitched the bridle of his horse to the palisades.

It will be noticed that Mr. Davis was seated in the Senate Chamber an hour before the President-elect arrived. So he

could not have known from personal observation whether Mr. Jefferson rode or walked.

The Capitol, in March, 1801, was, as we shall see, part of the present building. From what point did the President-elect start to go to it, that morning?

Mr. Jefferson had been Vice-president during the term of his predecessor. He had, therefore, been living in Washington. A scrutiny of the *National Intelligencer*, a Washington publication of those early days, brings to light the following news item, (November 28, 1800):

> Last evening arrived in Washington, Thomas Jefferson, Vice-President of the United States, and took up his lodging in Messrs. Conrad and McMunn's apartments.

Further search back through the *National Intelligencer* brings to light this paragraph, (November 24, 1800):

> Conrad and McMunn have opened houses of entertainment in the range of buildings formerly occupied by Mr. Law, about 200 paces from the Capitol in New Jersey Avenue, leading from there to the Eastern Branch.

The Conrad and McMunn boarding-house was, in fact, a line of three brick houses at the northwest corner of New Jersey Avenue and C Street, S. E.—across from the present House Office Building. The houses had been built by Thomas Law. Later, they were rented to the Government for the home of the Coast Survey Service and other departmental purposes. Later, they were converted into a hotel known as the Law House, and later as the Varnum House. One friend of Mr. Jefferson's has left it on record that the Vice-president boarded at "Canaird's house on the south side of Capitol Hill," with some thirty Democratic members of Congress. It is evident that Canaird and Conrad are one and the same. Conrad & McMunn's was the home of about thirty Democratic Senators and members of Congress, a few of whom had their wives with them. While Jefferson lived there, it was probably a sort of gathering-place for the Democratic leaders; indeed, wherever Jefferson lived would have been such a gathering-place. There is a story that, while Vice-president, Jefferson had partaken of his meals at the foot of a long table near the door, insisting that the ladies of the table should be seated near the fire, and that no precedence should be accorded him because he was presiding officer of the Senate.

It is not likely that Thomas Jefferson, a lover of fine horse-flesh, would have lived at Washington three months without a horse, but it would have been an absurdity for the group to have mounted horses for a journey of two hundred paces. "Jack" Eppes, Jefferson's son-in-law, was bringing on four coach-horses, bought somewhere in Virginia for $1,600, but neither coach nor horses had reached Washington on the day of inauguration.

From Conrad & McMunn's, therefore, Mr. Jefferson started for the Capitol at noon, Wednesday, March 4, 1801. The retiring President did not call for him, according to the custom which has since come to prevail. Mr. Adams had ordered his carriage and left Washington before daylight. What actually happened is narrated in the following brief description which is to be found in the *National Intelligencer* of March 6th (that was very swift reporting for those days):

> At an early hour on Wednesday the City of Washington presented a spectacle of uncommon animation, occasioned by the addition to its usual population of a large body of citizens from adjacent districts. A discharge from the Company of Washington Artillery ushered in the day, and about ten o'clock the Alexandria company of riflemen, with the company of artillery, paraded in front of the President's lodgings.
>
> At twelve o'clock Thomas Jefferson, attended by a number of his fellow-citizens, among whom were many members of Congress, repaired to the Capitol. His dress was, as usual, that of a plain citizen, without any distinctive badge of office.
>
> He entered the Capitol under a discharge of artillery.
>
> On his entry into the Senate Chamber, there was assembled the Senate and the members of the House of Representatives. The members rose, and Mr. Burr left the chair of the Senate which Mr. Jefferson took.
>
> After a few minutes of silence, Mr. Jefferson rose and delivered his address before the largest concourse of citizens ever assembled here. After seating himself for a short period, he

again arose and approached the clerk's table, where the oath of office was administered by the Chief Justice; after which he returned to his lodgings, accompanied by the Vice-president, Chief Justice, and heads of Departments; where he was waited upon by a number of distinguished citizens.

As soon as he withdrew, a discharge of artillery was made. The remainder of the day was devoted to festivity, and at night there was a pretty general illumination.

Neither Mr. Adams, nor Theodore Sedgwick, Speaker of the House of Representatives, was present at the inaugural ceremony, both these gentlemen having left the city at daylight on that morning.

The same account appears in the Philadelphia *Aurora* of March 11th. William Duane, the notorious editor of the *Aurora*, was in Washington at the time (hanging on his patron Jefferson's heels and arranging for such honest graft as a printer and stationer could get out of the Government), and it is within the range of possibility that the Philadelphia account of Jefferson's inauguration was set up by the hand of James Wilson, grandfather of Woodrow Wilson. Thus far investigation has not learned the exact date of James Wilson's arrival in the United States, but it is known that he was setting type on the *Aurora*, of which later he became at least titular editor, as early as 1808.

The Chief Justice was John Marshall. Mr. Burr had been sworn into the Vice-presidency at eleven o'clock — so we learn from a dispatch printed in a New York paper of the time. A dispatch printed in the *Aurora* some days later stated that there were about one thousand people present in the Senate Chamber, besides the members of Congress, and not less than one hundred and fifty ladies.

It is difficult to see how one thousand spectators could possibly have been crowded into what was then the Senate Chamber. At that day the Capitol consisted of what was known as the North Wing, that part of the building for some time occupied by the United States Senate, but at the present time given over to the Supreme Court. To-day the Supreme Court Chamber could not possibly contain one thousand persons. However, studies of the history of the Capitol made for the Columbia Historical Society render it reasonably certain that the Senate Chamber was originally on the basement floor; it was lifted during Jefferson's administration. At the time of his inauguration the foundations of the rotunda were in place, as were those of the "grand staircase" (now Statuary Hall), while the South Wing, to be occupied by the House of Representatives, was fairly above the ground.

There is one other side-light on the inauguration of the first Democratic President. It is said that a gentleman from Baltimore, an invited guest, asked permission to wish the new President joy. "I would advise you," answered Jefferson, smiling, "to follow my example on nuptial occasions, when I always tell the bridegroom I will wait until the end of the year before offering my congratulations."

The historical imagination finds little to take pleasure in in the setting of the scene of the Great Democrat's induction into the Presidency. The beginnings of the Capitol and the unfinished Executive Mansion were the only objects in Washington to attract the eye. The President's house had been occupied by the Adamses for a few months. Mrs. Adams, on the journey down in the autumn, had lost her way while in the wilds between Baltimore and the new capital "city." A Negro met by chance had set her party right, and they came dismally along the horrible roads to the President's "Palace" — as it was indeed then called, being copied after the Duke of Leinster's palace in Dublin. The great porticoes of the present day were lacking; indeed, there was no vestibule at all; the main staircase had not been put up, and the East Room was unfinished — Mrs. Adams found it a good place in which to hang clothes to dry She complained bitterly that there wasn't a bell in the house, that there were no grates in which to burn coal, and as for wood, there was nobody in Washington to cut it.

Between the unfinished White House and the beginnings of the Capitol stretched a wide road "straight as a gun barrel," as one visitor described it, but full of holes and abandoned sand-pits. John

Cotton Smith, visiting Washington that year, described Pennsylvania Avenue as "a deep morass, covered with alder bushes." There were a few brick houses lined up on New Jersey Avenue, on the slopes of Capitol Hill, but elsewhere the capital "city" of 1801 consisted of woods, gravel-banks, brick-kilns, and rude houses, many of them mere laborers' shanties. Eight years later even, Frederick Jackson, the British Minister, wrote home that Washington was more like Hampstead Heath than any spot he had ever seen, being a place of heath, woods, and yawning gravel-pits. He remarked that he had started a covey of partridges three hundred yards from the House of Congress.

If Jefferson ever took his famous lonely ride on an inauguration day, it may have been when he relinquished the Presidency to Mr. Madison. Miss Sarah Randolph, daughter of Thomas J. Randolph, tells this story of her father, who was Jefferson's grandson:

> At Madison's first inauguration, he was a lad of seventeen years, and was his grandfather's sole companion as he rode, in those days of republican simplicity, up Pennsylvania Avenue on horseback from the President's House to the Capitol, where grandson and grandfather dismounted, hitched their horses to the palings, and the latter went into the Congressional Hall to see the Government pass from his hands to those of his friend.

For sixty years Presidents came and went — ten of them. Political battles were lost and won. But as memory traces the history of the country it recognizes no political revolution until the crisis that ushered in the Irrepressible Conflict over slavery, between the Union and the Confederacy. The story of the Presidency reaches its chief dramatic climax in the figure of Abraham Lincoln and in his inauguration on Monday, March 4, 1861. It would be superfluous to dwell on the significance of the event of that day.

On reaching Washington after his secret night ride from Harrisburg, Mr. Lincoln went to Willard's Hotel, where he spent the few days before the beginning of his term. The Senate was in session all night March 3rd and 4th, and Mr. Buchanan was at the Capitol, busy signing belated bills, until ten minutes after noon on the 4th. Then he was hurriedly driven back to the White House, entered an open barouche, and proceeded, alone, to the Willard. The crowd that gathered about the entrance of the hotel saw a heavy old man, with thin gray hair, a face seamed and wrinkled, a head curiously inclined toward the left shoulder, in a low-crowned, broad-brimmed silk hat, an immense white cravat wound around his throat like a poultice, thrusting the high collar up to his ears, and a swallow-tailed coat, alight and enter. In a few minutes he reappeared, Mr. Lincoln on his arm. The two took seats side by side, and the carriage rolled away up Pennsylvania Avenue.

Elaborate military preparations had been made, this time not for display, but for stern service in case of emergency. The Avenue was lined with a double file of soldiery, and on either side and before and behind the Presidential carriage rode an armed escort. In windows all along Pennsylvania Avenue and in the Capitol building were stationed riflemen. Cavalry guarded the crossings. A battery had been so planted on Capitol Hill as to command the plaza in front of the Eastern Portico, where the inauguration was to take place.

So closely surrounded by soldiery was the Presidential carriage as it moved that comparatively few of the crowd caught even a glimpse of the occupants. The procession took over an hour — so crowded were the streets — to reach the north end of the Capitol building, where Mr. Buchanan and Mr. Lincoln descended and were passed rapidly through a high board barricade to the door of the Senate wing.

As they entered the Senate Chamber, which was crowded, it was observed that Mr. Buchanan, peculiarly stooped and aged, seemed hardly half the size of the towering Lincoln. The two sat for a moment in the Senate Chamber, Mr. Buchanan audibly sighing repeatedly while the oath was administered to the Vice-president.

Then the party proceeded to the East Portico. Over the steps had been built a platform, on which the political notables

were gathered, and before which a crowd, variously estimated — by one reporter as high as 100,000 people — was assembled. The spectators looked upon a Capitol still unfinished; the dome was still rising, and great derricks stood upon it midway in air, while networks of steel ropes hung all about. The great statue which now surmounts the dome was on the ground.

It was nearly half-past one when the Presidential party emerged. The gaunt form of the President-elect was first visible to the crowd as he slowly made his way to the front. To one spectator, at least, who had known him in Illinois, Mr. Lincoln was completely metamorphosed, through the efforts of injudicious friends and ambitious tailors. He was raising a crop of whiskers, and they were still coarse and stiff. He was dressed in a suit which he had never worn before, a dress coat, black trousers, and satin vest, and carried, in addition to a glossy hat, an ebony cane with a large gold head. Reaching the platform, his apparent discomfort was visibly increased by his uncertainty as to what to do with his hat and his cane; he stood the picture of embarrassment for a moment. A little stand had been placed at the front of the platform, and Mr. Lincoln looked at it, considering whether it would hold his hat, his cane, and his manuscript. Stephen A. Douglas, who sat in a prominent place, saw Mr. Lincoln's difficulty and came to his aid, relieving him of his hat, which he held throughout the ceremony. This was the most remarked occurrence of the day. Douglas had been, in singular fashions, the rival of the President-elect from early days; both had been candidates for the hand of Mary Todd; they had campaigned against each other for the Illinois senatorship, and finally they had been pitted against each other in the Presidential campaign lately closed.

Mr. Lincoln laid the manuscript of his address upon the stand, and began to speak, in clear, strong tones. He had had years of experience in out-of-door campaigning in the West; as he spoke, he turned the pages of the manuscript, but his eye did not follow it; so carefully had it been word for word considered and revised that it was in his memory. The day was cool, but not unpleasantly cold; not bright, the undetermined sunlight occasionally prevailing through light clouds. After he had spoken a minute or two, a light wind blew across the stand, and Mr. Lincoln moved his cane, laying it across the pages of the manuscript. The concluding words of the address — the lines about "the mystic cords of memory," which had been suggested by Seward — provoked enthusiasm, but little cheering punctuated the discourse, which was listened to for the most part in impressive silence.

Then arose an attenuated figure in a black gown, Chief Justice Taney, with his cadaverous countenance. The clerk opened a Bible. Mr. Lincoln laid his hand on the book, repeated the oath, and touched the open page with his lips. The guns on the plaza thundered, and the new President and his predecessor returned to the carriage (this time Mr. Lincoln taking the right-hand seat) and made their way down Pennsylvania Avenue to the White House. On the threshold, Mr. Buchanan warmly shook Mr. Lincoln's hand, bade him an earnest farewell and departed, leaving the gigantic task of the Union's salvation to hands abler than his own.

Since the entrusting of the Republican party with power in 1861, there has been no political revolution comparable with that which is about to be at once put under way by the inauguration of the Administration of Woodrow Wilson.

On March 3rd, Mr. Wilson and his family will go to Washington by train, traveling as ordinary citizens. They will sleep at a hotel. On the 4th, Mr. Wilson will call on Mr. Taft at the White House. The retiring and the incoming President, the former seated on the right, will drive, with the escort which has become customary, through cheering throngs, up the Avenue which every President since Jefferson has followed on his way to his exalted seat. Arrived at the Capitol, Mr. Wilson will read his inaugural address, and then, in the presence of thousands, representing the citizenship of the Nation, standing in silence with bared heads, will take the oath administered by Chief Justice White:

I do solemnly swear that I will faithfully execute the office of the President of the United States, and will, to the best of my ability, preserve, protect, and defend the Constitution of the United States.

Who can say with what emotions on the part of each, William Howard Taft, as the two reënter the carriage, will indicate to his successor, and Woodrow Wilson will take, the seat on the right, for the ride back to the white mansion-house which one of them is to leave and in which the other is to remain as he takes up his high and heavy task?

INVESTMENT THAT IS TROUBLE-PROOF

WHEN men begin to figure that possibly everything is not right with the country, and that possibly there will be financial trouble in the near future, a great deal of money is withdrawn from the markets and becomes idle. There are signs that at the present time there is a great deal of idle money in this country.

An old man who called at this office a few months ago had grappled with this problem of using money that he was afraid to venture into ordinary investments, and his experience had been happy. He became cautious in 1903, when there was a short-lived industrial disturbance which threatened to become serious.

He had bought some municipal bonds which ran in series, some of them maturing in two years and some maturing yearly thereafter. He had bought a railroad bond which matured in four years, and two railroad equipment issues, one with three years and one with five years to run. He had also bought a short-term note of a strong electric light and power company. He had capped his list with two local mortgages with three years to run. These were all of very good quality. His average income was about $4\frac{3}{4}$ per cent.

That was practically a trouble-proof investment. Naturally he had not been able to make it alone; so he had called upon a conservative and well-known banking house, had told them exactly what he wanted, and had followed their advice literally except for the two local mortgages, which had just happened to come along then, and which he knew to be good.

That is the safest system or method of making an investment. There is an old saying that he who is his own lawyer has a fool for his client; and the same idea can be applied pretty well in investment matters. It is good common sense to apply to investment all the business sense you have; but it is very poor business to go ahead without expert criticism or advice unless you have a wide training and experience in investments. The records show that even the most skilful lawyers and business men blunder here. For example, the assets held in the estate of the president of one of the big banks in New York City showed that during the last few years of his life he had invested in nearly a dozen worthless stocks and that probably a quarter of a million dollars had slipped through his fingers in this way.

This department has had a good deal of experience in investments with banks and bank officers. Only in one or two isolated instances has it encountered in ordinary banking circles a deep training or wide expert knowledge of the value of securities. The business of a president of a bank has nothing to do with the stock market.

This old man, therefore, had been very fortunate in his source of advice. He said that about two years after he made his purchases he thought he wanted to sell some of his securities. He found that he could sell them all right but that the prices had declined a little from the prices he had paid. He wrote a petulant letter to his banker and received a brief but convincing reply to the effect that all the securities had been recommended to him for income only; that they were all perfectly good and would pay their principal and interest as they fell due; that if he

wanted to buy them now he would have to pay for them just about as much as he paid before; and that the difference between the buying and the selling price represented merely a small margin of gross profits upon which the banking house does business.

When he talked to this department, time had healed his little resentment and he said that the service of the banker had been entirely satisfactory to him. He had come to understand that, in this quiet, trouble-proof kind of investment, you cannot have free marketability at exactly the price you pay. He had even tried to sell an assignment of one of the mortgages, and he had discovered that the necessary fees and commissions would make his discount on the mortgage a good deal bigger than the discount on his bond. He had come to understand the simple fact that it costs some money to do business in any kind of securities and that somebody besides the banking house has to pay these bills.

To any one who wishes to be immune from trouble, nothing better can be recommended than the classes of investment in which he had put his money. Nowadays, if you ignore the market altogether and simply invest for a stipulated period, intending to hold everything until it matures, it is quite possible to get a full 5 per cent. on the money and to get the whole of the principal back within five years. Thus a man may steer his ship into a quiet eddy in the stream of business and lie safely at anchor for as long as he likes no matter what happens outside.

Of course, the first thing to do in following any such course is to strip from your mind all idea of increasing your principal by the process. The only way a man can make money in securities is to buy something that may go up in price. Obviously, a thing cannot go up in price very much if it is going to be paid off in a couple of years at about the price you paid for it.

In buying short-term securities, there are only a few things to avoid. Do not let anybody sell you the short-term obligations of railroads, industrials, or of any other concerns that are known to be weak or sickly. Avoid the obligations of all concerns that have never been able to earn and to pay honest dividends on an honest capitalization. Choose notes or bonds that have solid securities pledged under them, rather than mere debenture notes or unsecured promises to pay, no matter how good the name of the company. Do not buy from chance acquaintances, from untried brokers or dealers, nor from anybody whose credentials are not very easy to check up.

In the mortgage field, it is sometimes not wise to buy from your friends. A case in point came to this department immediately after the panic of 1907, when a woman, who lived in a woolen manufacturing centre, found that more than half of the mortgages she held were on the houses of employees in the mills, unable to meet their interest because a great many of the men were out of employment for a time. She discovered at the same time that it would be rather inhuman to foreclose these mortgages, and she simply had to wait until the trouble rolled by. A mortgage held under these circumstances could hardly be called a trouble-proof investment.

This short-term market is not the only refuge for the man who is trying to avoid trouble. There are a good many temperaments that would be just as well content holding safe long-term bonds as holding safe short-term bonds. To such people bonds of long term, but secured by mortgages on terms that make them safe no matter what happens, are just as good as any short-term securities. They will fluctuate in price according to conditions that follow their purchase; but when the trouble rolls by and business goes on the same as before, they will generally come back and prove as satisfactory as ever.

The investor in bonds, like the investor in mortgages, will get, after a while, into a frame of mind that is itself the best tonic to prevent uneasiness.

It is so easy and simple to put your affairs in comfortable shape to meet all possible conditions and to pay you at the same time a good return on your money, that the only wonder is that so many men are caught in situations that bring them a great deal of anxiety and sometimes a

great deal of loss. The wise man, in investment as in business — for after all the same principles underlie the two — is the man who, when he is not quite certain where he stands, will get himself into the position where he stands to lose least if things break against him but to gain for himself immunity from danger and from discomfort and a fair return from his money or his business.

FIVE RATTLING DETECTIVE ADVENTURES

THE NEW METHOD OF DETECTIVES WHO HAVE TURNED SCIENTISTS — HOW CROOKS ARE MADE TO CATCH THEMSELVES

BY

ARTHUR B. REEVE

IT TAKES a thief to catch a thief" has been revised by the modern scientific detective and now reads, "It takes a crook to catch himself."

In other words, what the psychologists call the law of suggestion has been applied to criminal investigations and the results are such that the leading detectives to-day have been able to develop a delicate system of investigation in which the masterful mind of the detector is matched against the wits and the cunning of the most clever criminal.

"If you want to catch a crook," says Mr. Raymond C. Schindler, formerly manager of the William J. Burns Agency in New York, "you must get that crook himself to help you. That is the surest and safest way. The crook will not, of course, take the job willingly. To get him at work is the problem of the real detective."

There are dozens of good stories of how the new method has been put into operation in cases which under the old system would have been hopeless mysteries. For, as Mr. Schindler remarks, "behind every crime is left a thread which, if found and followed, will lead to detection, capture, and conviction. First you must follow this thread to the weaver, then you must set the weaver to work against himself until he is caught in his own web. I can believe that no man's imagination is greater than the executive skill of another. For any plot that one may map out in imagination, there is someone who is capable of putting it into execution. Unravelling a crime is the task of the man whose delight is in solving puzzles that apparently have no solution."

Psychologists of the new school — psychologists, that is, who acquire knowledge in the laboratory instead of evolving it out of their inner consciousness, and who weigh and measure, like other scientists, instead of assuming and asserting — have long been proclaiming and offering to prove their ability to teach the courts something new about the administration of justice and the detectives something new about the detection of crime. Both the courts and the detectives have viewed the offer with suspicion and, like the experienced practitioners of every art and trade, have been inclined to deride the new methods as necessarily inferior to the old. As a result, trials still go on with the testimony of witnesses subjected only to tests which leave its accuracy a matter of opinion instead of a matter of scientific fact, though it could often, if not usually, be made certain by the use of methods that are well known in every laboratory of experimental psychology.

Curiously enough, however, detectives are showing themselves more open-minded than judges and are beginning to show an almost cheerful readiness to substitute science for the old haphazard methods. It was long after the professional detec-

tives had been convinced by amateurs that finger-prints provide an infallible means of identification that the courts consented to receive such evidence and then only with reluctance and corroboration. No court would allow a jury to draw conclusions as to a witness's credibility in the way that Professor Münsterberg, of Harvard, convinced himself of Harry Orchard's veracity. But many detectives are studying and practising his "psycho-analysis" and have learned that very practical and valuable results can be obtained by measuring the time it takes one word to suggest another to a man suspected of a crime.

The use of the sphygmograph, for detecting emotion by the pulse in the forearm, and other instruments of the psychological laboratory is only a very small part of the new methods in detective work. The principles underlying these devices are being used, rather than the devices. But the significance of heart beats, of breathing, of perspiration on the palms of the hands, long known and studied by the scientists, forms as convenient a starting point as any in telling about the new methods of the real detectives.

A very interesting instance drawn from the experience of Mr. Schindler illustrates well the new rule of setting a crook to catch himself:

In one of the large cities of the East about four years ago a gang of "toughs" were suspected of having brutally beaten a young girl. There was little doubt that at least one or more members of this gang were implicated. One man could easily have committed the crime. There was no evidence to show which of the gangsters had done it, and gang-men are a close-mouthed species. The criminal would never have been discovered if the detectives had not tried a most unusual experiment.

The detectives began by securing the aid of one of the leading moving picture companies. They picked out a film which depicted the story of a crime very much like that which they were investigating. In fact, the story happened to be so much like that on which the case hinged that except for the faces of the actors and the setting it could very well have been the crime on which the detectives were working.

Arrangements were made with a moving picture theatre in the neighborhood which the gang haunted to have this film displayed. While it was being run off one of the detectives who was "roping" the subjects and who had worked himself into their confidence to the extent of chumming around with them, brought one of the gang at a time to this theatre.

Four members of the gang each saw the picture separately. Only one responded to the experiment. The others were deeply interested, probably knowing the details of the crime that one of the gangmen had perpetrated. But the man who had committed the crime showed conclusively his guilty knowledge of the affair. He showed it in his breathing and he showed it in the beating of his heart. Actually his heart was thumping so hard in the darkness of the theatre that it was distinctly audible to the detective sitting next to him and leaning lightly against him. From that time on the detectives concentrated their efforts upon this man and finally, when they had massed the facts and confronted him with them, he broke down and confessed.

The law of suggestion put the detectives on the right road and the suspect was used to involve and catch himself.

Deputy Police Commissioner Dougherty, of New York, employs the new method. He employed it in a notorious taxicab robbery case, in the Rosenthal case, and in other cases, and he has acquired a wide reputation for his new "kid glove" third degree, which is nothing else than setting a crook to catch himself in an innocent conversation, instead of by bulldozing and bullying.

A short time ago Commissioner Dougherty said: "Prof. Münsterberg a theorist? Not a bit. He is there with the practical goods. When he says that there are physical means of detecting whether or not a man is lying he is simply stating a fact. There was the case of Paul Geidel, who murdered William H. Jackson in the Hotel Iroquois. When I first found the boy and began to talk to him I picked up his hand and while apparently examining it for blood stains I put my index finger

on his pulse and began to ask leading questions, particularly concerning his whereabouts on the night Jackson was murdered. The minute the boy realized the drift of my questions his pulse started at 'third speed.' I knew I was on a hot trail and felt pretty sure I had found the murderer."

An interesting illustration of how, by the law of suggestion, a crook may be made to catch himself, is found in the Marie Smith murder case. A nine year old girl had been found murdered on the outskirts of Asbury Park, N. J., having been attacked while on her way home from school. After a protracted investigation by Mr. Schindler, in which by elimination all other suspects had been removed, suspicion fell upon a gardener, Frank Heidemann.

Heidemann was working from early morning until late at night in the greenhouses of his employer and consequently no one could get at him to get into his confidence. Schindler wished to get him among strangers where he would be more susceptible to new friendships. He had operatives of the agency try to find employment with Heidemann but his employer did not need help. More than that, his employer believed in him and thought that the young man was persecuted. He warned the detectives off his place and even got a warrant for one of them. Heidemann did not go out at night and consequently was inaccessible.

Heidemann seemed to sleep well at night, and Mr. Schindler realized that as long as he was working all day long the man could keep his mind off his crime. Therefore Mr. Schindler determined that Heidemann must be got away from his position. The fact that he was sleeping well at night presented an idea. Was there no way to make him think over his crime at night?

In a kennel out by the stable was a big, loud-baying hound. It wasn't long before the dog took to barking and howling dismally every night on the premises where Heidemann slept. It is an old superstition that the howling of a dog about the house at night is a bad omen. Heidemann thought of that every time the doleful baying of the watchdog woke him up. At the house no one could understand what had come over the dog. Howling at night was something entirely new.

Sharp eyes on watch might have seen a man moving along the road after eleven o'clock every night. He slipped quickly into the bushes along the wayside, moved slowly and noiselessly in the underbrush, making a wide circle to reach a clump of laurels about thirty paces from the stables. It was cold, mid-winter weather and he wore gloves and a heavy overcoat into which he shrank for protection from the bitter cold wind.

The pockets of the man's overcoat were full of stones. About midnight he limbered up and threw a stone at the dog house. The hound lifted up a protest. Another stone was followed by another wail. Every time the dog stopped, the man in the bushes threw another stone, and when stones gave out he threw a stick. Now and then a gruff and angry voice from the house would restore quiet. More stones produced more wails. Sometimes the man in the bushes saw a light moving up in Heidemann's room. For two or three hours every night the dog acted as if bewitched. That kept up for more than two weeks, night after night. Then Heidemann suddenly announced that he was going to New York. Schindler knew that he would do so sooner or later if he was kept awake a few hours every night. The thing would work on his mind. And although there was no evidence against him the move confirmed the suspicion of the detective that he was on the right track.

The detectives kept Heidemann under surveillance in New York and after several months they were able to get a detective, whom we shall call "Carl," into his confidence. Carl became his chum and in a short time was living with Heidemann, for Carl came from the same town in Germany as Heidemann; at least he said he did.

They chummed for some time, but it was not reasonable to suppose that Heidemann would talk about his crime even to his intimate friend, and much less confess his crime if guilty. Thus, to make him of his own accord tell of his crime, it was necessary to employ the law of suggestion again. The detectives had an article

published in the newspapers mentioning Heidemann's name so that the detective with him might plausibly bring up the subject. Carl's surprise on seeing his friend's name connected with the murder was sufficient to enable him to talk with Heidemann on the matter naturally. Nothing of importance was gained in that way, however.

Now to get Heidemann to confess his guilt it would naturally be necessary to put the detective in the same category as Heidemann. In other words, he must commit a murder. There are some places where suggestion must fall short of fact. This was only a fake murder. It was planned and carried out one snowy night near Yonkers when Carl and Heidemann were driving in a sleigh. Carl got into an altercation with a stranger, drew a gun, shot him (apparently), and fled, leaving him lying by the road. It was a clever bit of melodrama and Heidemann fully believed that Carl had shot and killed a man. But the fact did not seem to worry him much. He stayed with Carl right along, for Carl was paying the expenses for both and Heidemann believed that he possessed considerable money which had come to him on the death of his parents.

From Yonkers they fled to Atlantic City, and there Carl told of his brother who was also, he said, a desperate criminal. He suggested that the three of them should flee from this part of the country for good and go out to the Pacific Coast where they were not known. Carl was now working for the climax which was to bring the confession, and every detail was planned with the utmost precaution. The plan was to make Heidemann think that Carl was trying to deceive him and slip away from him. So a sailing-list of ships to Germany was procured and on the schedule notations were made as to the steamship Carl was evidently expecting to take. Carl left the schedule sticking out of his inside pocket one day in the room, knowing that Heidemann would find it.

Heidemann did find it. Moreover, he noticed that one of Carl's grips was gone. There was every evidence in his mind that his chum was trying to slip away to Germany and leave him alone to shift for himself. Heidemann was scared. He was afraid to be left alone.

There was no affectation about Heidemann's excitement and nervousness when Carl returned. He at once accused Carl of trying to desert him. Carl protested, but when Heidemann produced the doctored sailing-list he was forced to admit that he intended to leave him.

"I've been thinking about it a whole lot," pursued Carl, speaking German, as they always did when conversing, "and I think I had better leave you because some day you may squeal on me for killing that man in Yonkers, and then it will be all over with me. As much as I regret it, I can't do otherwise. Why, I find myself waking up at night in a cold sweat thinking of only one thing, that you might some time become angry with me, inform the police, and send me to the chair."

Heidemann pleaded earnestly. Never would he betray his friend.

"That's the way you feel about it now," objected Carl, "but I tell you, Frank, I'm afraid of you. I fully trust you now. But who knows what may happen? I must leave you or I'll go crazy."

Heidemann was now genuinely alarmed at the serious turn of events. He saw the certainty of his friend leaving him alone and without money. Carl could see that the confession at which Heidemann had been hinting for weeks was coming. He made a desperate effort to control himself.

Heidemann again protested that he would never betray his friend. It could never happen. Even if it were not for friendship's sake he would never squeal on Carl. He would be held in check by fear. "For, Carl," he added, "you would tell the police about me and then I would be in as bad a hole as you."

"What do I know to tell on you?" asked Carl. He was lying on the bed gazing up at the ceiling and did not even move his eyes as he asked the question. Heidemann sat on a chair in a corner of the room. He was looking at Carl with such an intensity that the detective could almost feel it.

Both were quiet for a moment. Then Heidemann said: "Carl, I want to tell you something——"

It was coming! He had started to tell the story of how he had killed little Marie Smith so that he might put himself in the same position as that in which he believed Carl to be. Carl saw a successful ending to all the weary weeks of revolting companionship with Heidemann. The break in the long strain proved too much for Carl — for just a moment the detective lost control. He raised his head as Heidemann paused, as if to urge him on. In some way his eyes must have flashed Heidemann a warning. Heidemann did not go on. Carl's heart became heavy with disappointment and anger at himself. But he had regained control of himself. He did not appear to be interested. Outwardly he was just as ever, for it would be fatal to urge Heidemann now. Carl himself turned the conversation to other subjects. He threw himself back on the bed and turned his back.

Again the fear of being left alone in America began to work on Heidemann as the detective had hoped it would.

"I was going to tell you, Carl," he began.

This time Heidemann caught himself — he made his confession.

And not only that, but to convince the "brother" of Carl that he was as bad as they he repeated it the next day, with the authorities from Asbury Park secreted in the next room. From the baying of the hound to the doctored sailing-list, a particularly disgusting crook had caught himself by the law of suggestion.

Every case must be taken by itself in working out this new method of letting the crook catch himself. The "frame-up" is different in every instance and depends for its success entirely on the ingenuity of the detective. Thus it became necessary, to unravel a mysterious burglary, to find a way of ascertaining which one of three persons had gained access to the teller's cage in a large bank. That person, whoever he was, had committed the robbery. Aside from shadowing all three to find out which was spending more than he was earning or in any other way betraying himself, there was little else that could be done to clear up the mystery. No finger prints had been left which would give the detectives a clue, although they had searched for them.

The very fact that none had been found was used to catch the thief. The law of suggestion was called into play. No one but the detectives knew that finger prints had not been found. However, all three suspects were closely questioned on separate occasions after a newspaper had published an article concerning a report that finger prints had been found which would lead, it was expected, to the identification of the guilty person. The detectives knew that the suspects, being bank clerks, were intelligent and had read about finger prints; that they must know that finger prints never fail.

Accordingly, when each of the three was questioned the detectives had the money tray and other articles displayed where the suspects could see them. Naturally, it seemed to the suspects that these articles were the very ones referred to in the accounts and that they bore the tell-tale finger marks. It was noticed that one of the suspects showed considerable anxiety to pick the articles up and handle them. Finally he was allowed to do so. He seemed much gratified and the remark that he made to one of the men in the bank afterward, that he certainly could not be suspected even if his finger prints did show on the articles now, for he had handled them in sight of everybody, enabled the detectives to focus their attention upon the right man. Without wasting any further time they watched him and finally were able to get him to confess that it was he who had entered the cage and had taken the money.

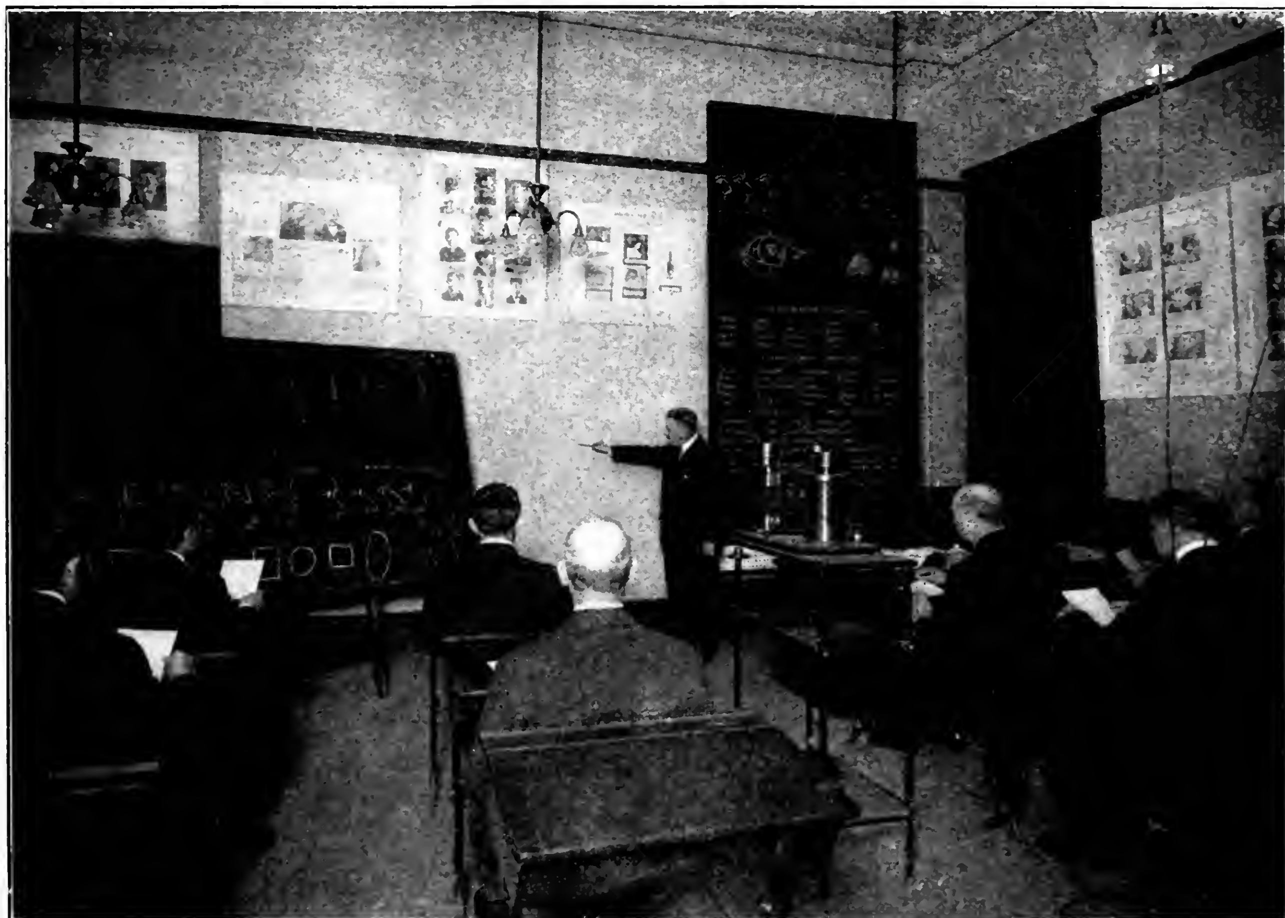
Working on the fears and weaknesses of humanity is the secret. In another case a prominent broker had been robbed by his brother, who for five or six years had been acting as his bookkeeper. The loss was fifty or sixty thousand dollars, and the money had been spent gradually on the "Great White Way."

When the thefts were finally discovered, the broker, not wishing to have his family name besmirched, did nothing more than discharge his brother. He first asked him, however, how much he had left, and the brother said that aside from two or three

hundred dollars he had spent all. Reports came to the broker later that the brother was still keeping up the old pace. It seemed reasonable to suppose that he had some of the money "salted" away in a safety deposit box, and for two or three weeks the brother was closely shadowed. But the shadowing led to nothing.

Here again the detectives were forced to fall back on the law of suggestion and make the criminal catch himself. It was arranged with a newspaper that one copy of the morning edition should be published in which it was reported under a huge black scarehead that a prominent safety deposit institution had been rifled and the contents of the boxes stolen. The article went on to tell in detail how one of the clerks who had charge of the safe deposit vault had obtained, during two or three years, impressions of the keys of all the boxes. At an opportune time, the article said, he had rifled them all, taking the money and valuable documents. For obvious reasons, the report added, the name of the institution in which this occurred was withheld from publication as the authorities expected to be able to apprehend the guilty clerk and did not wish to alarm the box-holders.

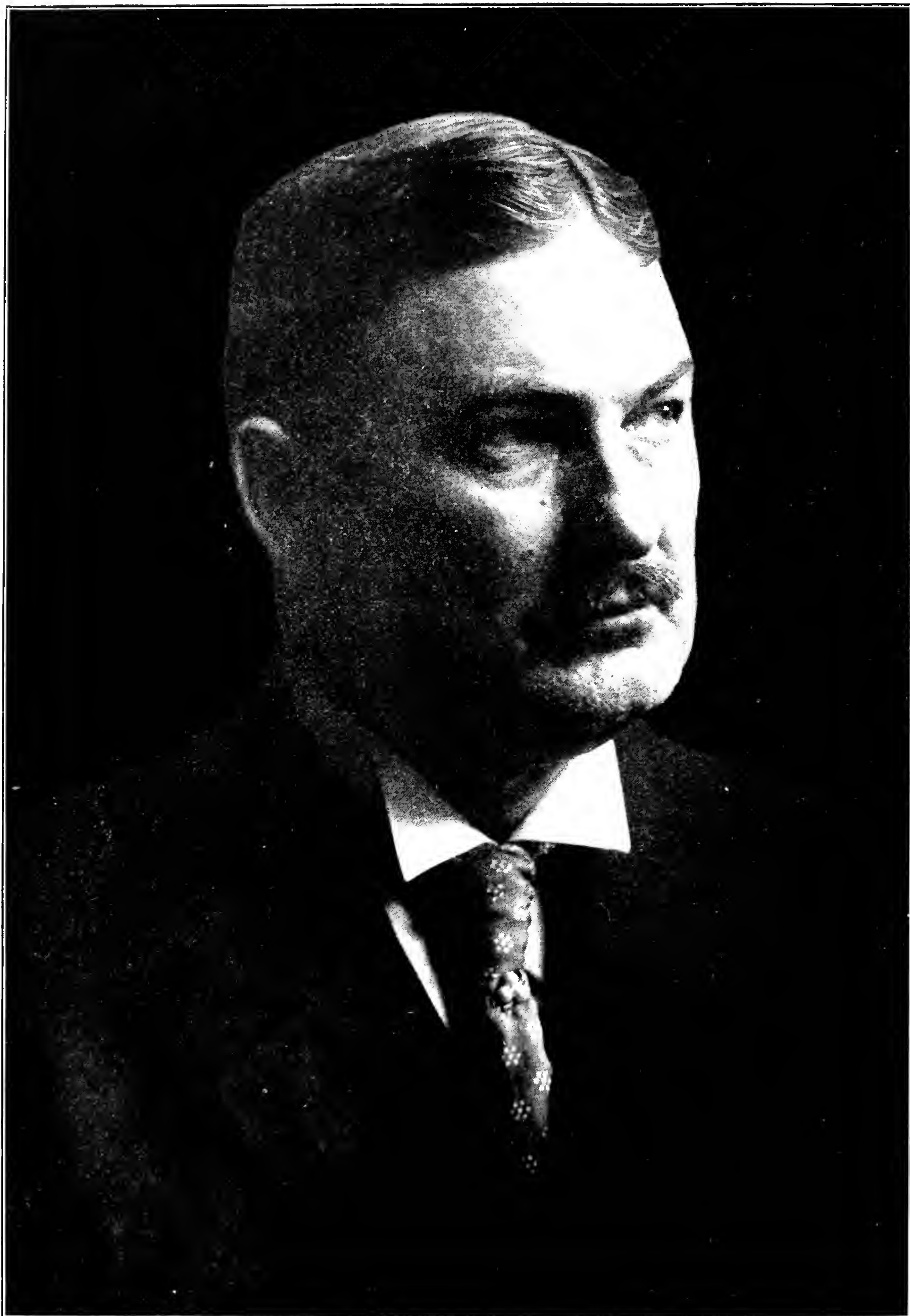
This single copy of the newspaper was delivered to the detective, who arranged that it should be placed on the breakfast table of the family of the suspected man. It caught the attention of the family, as was expected, and was read aloud. That was enough. It aroused the curiosity of the brother concerning the safety of his own money. He was shadowed directly to the safe deposit vault in which he had hidden his spoils, just as his brother, the broker, had surmised. In this way a portion at least of the stolen money was recovered and the defaulter never learned that there had been a ruse employed to lead him on to show where he had hidden the stolen money.



TEACHING SCIENTIFIC DETECTION AT POLICE HEADQUARTERS IN NEW YORK

EXPLAINING TO DETECTIVES HOW TO IDENTIFY CRIMINALS BY DISTINCTIVE FEATURES AND BY THE BERTILLON SYSTEM OF MEASUREMENTS OF THE HEAD AND BODY

Not so long ago, in a quiet little village in northern New York, a house robbery was perpetrated and considerable jewelry



MR. GEORGE S. DOUGHERTY

SECOND DEPUTY POLICE COMMISSIONER OF NEW YORK CITY, WHO BELIEVES THAT "THERE ARE PHYSICAL MEANS OF DETECTING WHETHER OR NOT A MAN IS LYING"

stolen while the family was at dinner. The investigation showed that two burglars committed the robbery and that they had gained entrance by climbing up a pillar at the corner of the porch and running along the roof until they were opposite the bedroom window. The window was easily opened. The jewelry had been in a safe, but the safe had been left open carelessly, even though it contained about fifty thousand dollars' worth of gems. The owner of the jewels, it seemed, had intended to wear some of them at dinner, to return immediately after dinner to her room, and to wear others at an affair that she was to attend during the evening. In that way she had forgotten that she was taking any risk by leaving the safe door open.

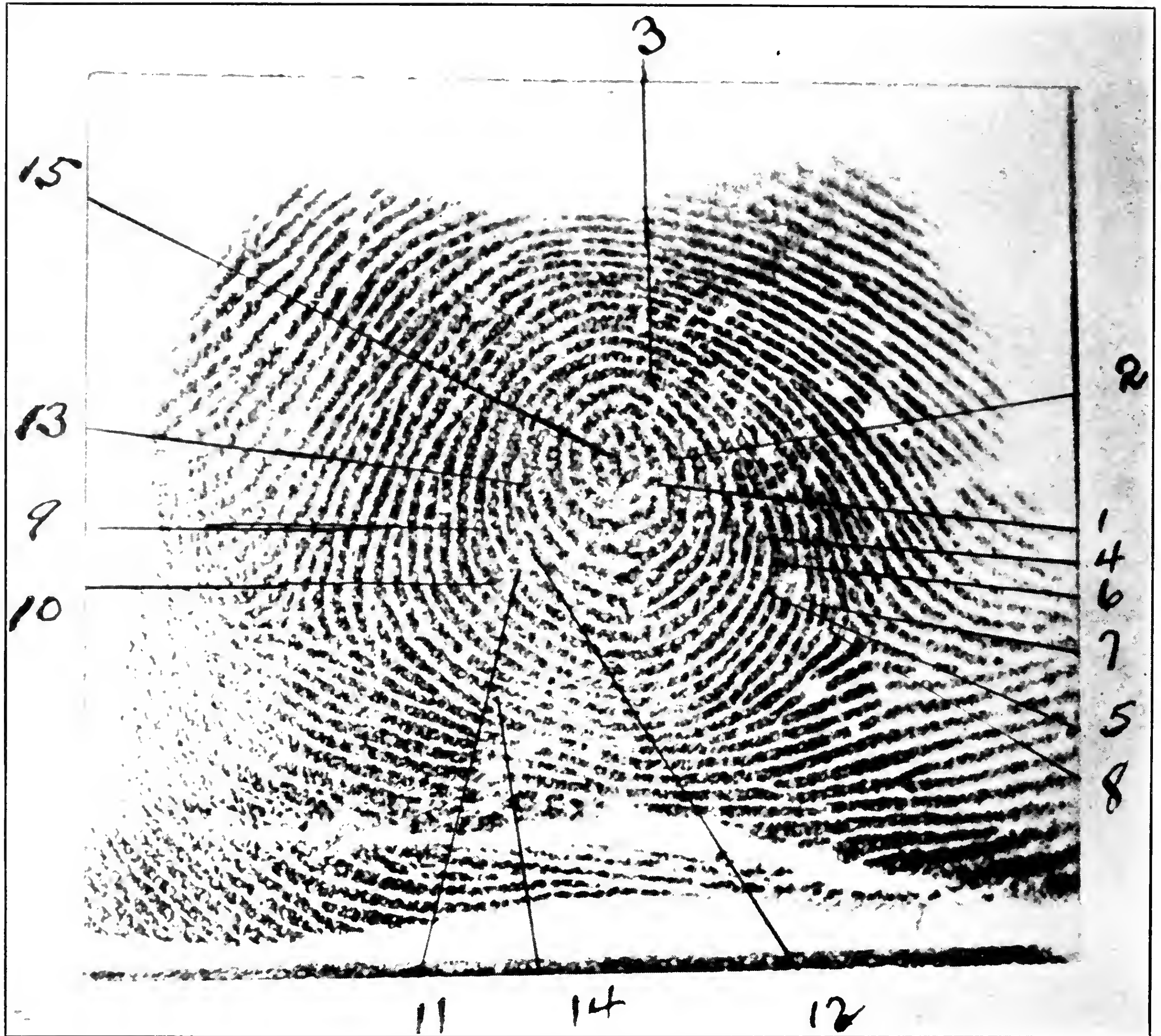
Modern methods of identification and apprehension of criminals, such as the Bertillon system and the finger-print method, caused suspicion to fall on two well-known crooks. Detectives investigating the case, after establishing by the finger print system the probable identity of the crooks, exhibited their photographs to the inhabitants of the neighborhood where the robbery had occurred and at least a partial identification was obtained. Several of the persons to whom the rogues gallery pictures were exhibited picked out the same two pictures as looking to them most like the persons they had seen loitering about the town. The finger prints, although fair, were not so satisfactory as was necessary to make identification positive enough to secure a conviction. But, with the partial identification, the whole thing was positive enough to make the detectives certain that they were on the right track.

MR. WILLIAM J. BURNS

THE FAMOUS DETECTIVE WHO USES SCIENTIFIC METHODS AND MODERN INVENTIONS TO DISCOVER CRIMINALS AND TO FORCE THEM TO CONFESS

Within a few weeks in New York City they were able to round up the suspected crooks, and although they were arrested there was not evidence sufficient to convict. The owner of the jewelry was naturally very anxious to recover it and private detectives were called in at this point with the difficult commission to recover the stolen jewelry.

Although the two suspects who had



A FINGER PRINT THAT CAUGHT A THIEF

THIS PRINT, ENLARGED FROM THE HANDLE OF THE LADLE THAT APPEARS ON THE OPPOSITE PAGE, IS IDENTICAL WITH THE FINGER PRINT OF A MAN WHO WAS ARRESTED AS A SUSPICIOUS PERSON IN 1908. THE NUMBERED LINES INDICATE FIFTEEN POINTS OF INDENTITY IN THE TWO PRINTS

been arrested were later released, it is well known that criminals of this class are naturally of such a wary disposition that it is extremely hard to shadow them without their knowing it. The private detectives, however, obtained rooms in the neighborhood where the suspects lodged and in that way they kept a partial watch on their movements, although it was principally on the busy thoroughfares that they were followed. After a few weeks of shadowing in this way, the suspects apparently came to the conclusion that they were not being watched.

The problem which now confronted the detectives was to make use of the law of suggestion in such a way as to cause the suspects to go to the place where they had hidden the stolen jewelry. The plan that was adopted shows how simple it is to suggest a certain action to another, as if by telepathy.

Through that mysterious underground channel that connectswith even thedarkest recesses of the questionable districts of any large city, word was passed by one of the detectives in such a way that it reached the ears of the first suspect that the police had that very day recovered a substantial part of the jewelry. It was sufficient only to have this report reach the ears of the first suspect through the proper channel to arouse his suspicion. The more he thought of it the more he wondered whether his pal had "squealed." And the more he wondered,

A LADLE WHOSE HANDLE BORE INCRIMINATING EVIDENCE

THE FINGER PRINT ON THE PRECEDING PAGE, FOUND ON ITS HANDLE, LED TO THE CAPTURE OF THE MAN WHO TRIED TO STEAL IT

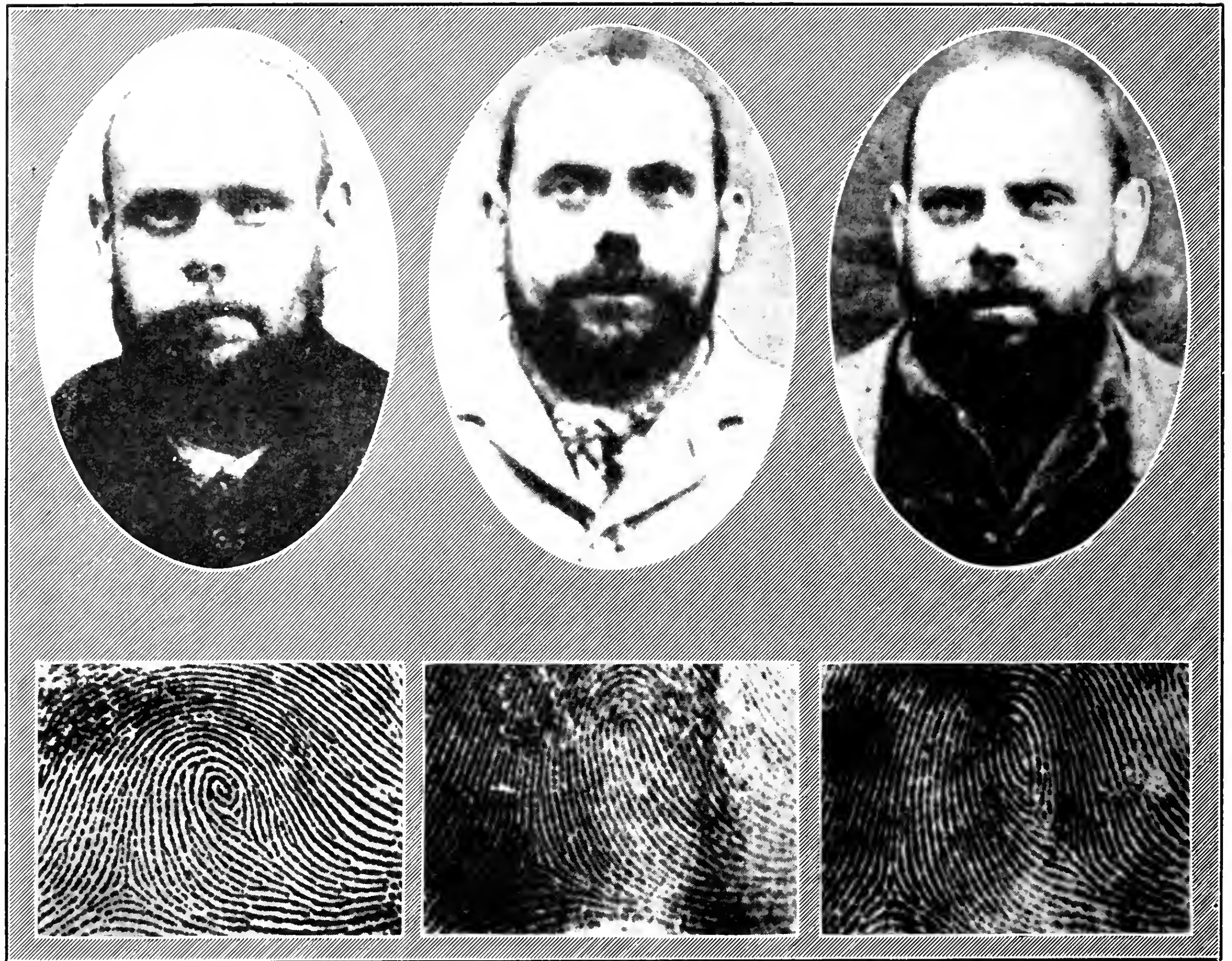
the more he desired to know. That was just what the detective had planned. The first suspect could resist no longer. He lost no time in hurrying to the spot where the jewelry had been hidden to see with his own eye whether the second suspect had failed him. He was shadowed to one of the suburbs of New York where, buried under a railroad bridge beneath a foot of soil, was a box containing the jewelry.

No doubt, the law of suggestion played an important part in the notorious McNamara dynamiting case. Some of the remarks made by "Jim" McNamara show that he realized it. To prove that the McNamaras, McManigal, and others had been in several cities in which dynamite explosions took place for several days before these explosions occurred, the prosecution had to bring dozens of witnesses from all sections of the country to Los Angeles to make identifications. The witnesses included hotel clerks, bell boys, hotel proprietors, 'bus drivers, liverymen, boarding house keepers, and numerous others.

While the McNamara jury was being empanelled, witnesses kept arriving in Los

MR. RAYMOND C. SCHINDLER

FORMER MANAGER OF THE BURNS DETECTIVE AGENCY, WHO HAS CAUGHT MANY CRIMINALS AND WHO DECLARES THAT "IF YOU WANT TO CATCH A CROOK YOU MUST GET THAT CROOK TO HELP YOU—THAT IS THE PROBLEM OF THE REAL DETECTIVE"



FINGER PRINTS VS. FACES

PORTRAITS OF THREE MEN WHO COULD SCARCELY BE DISTINGUISHED BY THEIR FEATURES BUT WHOSE FINGER PRINTS ARE UNLIKE. AN EXAMPLE OF THE VALUE OF THE FINGER-PRINT METHOD IN THE POSITIVE IDENTIFICATION OF CRIMINALS

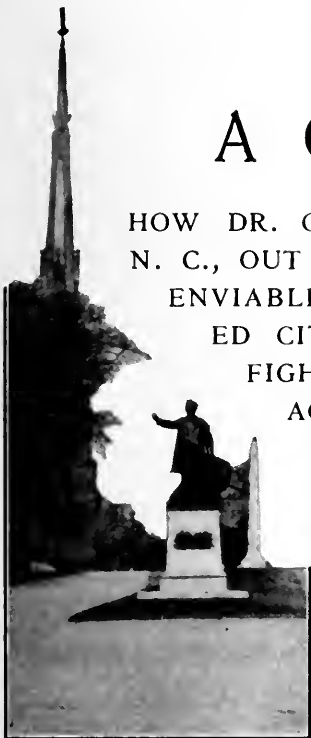
Angeles. That they might have a chance to see "Jim" McNamara and identify him, they were taken to court and were given seats where they would have a good chance to see the defendant. Therefore, every day when McNamara looked about the courtroom, he saw one or two persons staring at him intently. Naturally he recognized some of them. He must have asked himself where he had seen those faces before. Sometimes he could not recall. At other times he could. In both cases he was frightened.

So was kept up, day after day, an endless procession of accusing faces leveled at him. It did seem endless, too, for there were more than a hundred such witnesses. The strain began to tell on him. He thought about those faces in his cell every day after he left court. He had plenty of time to think about them in the loneliness and silence of his prison.

"My God, this thing is getting on my nerves," he cried one day to his counsel.

The law of suggestion was working inexorably. Day by day as he strove to recall just who some of the persons were who were there silently identifying him, as he struggled to advise his counsel accordingly so as to be prepared to meet them, he began to realize the utter hopelessness of his case. Of course, this was not the only, nor perhaps even the greatest, influence which moved him; but certainly a compelling part was played by this elaborate staging of the law of suggestion in bringing this notorious case to the conclusion of a confession. The criminal himself is perhaps the last to realize how tightly he winds himself in a web of his own making under the direction of a skilful detective. Seldom does he realize that it is he, himself, not the detective, who has caught him.

A CITY HEALTH PILOT



HOW DR. CHARLES T. NESBITT LED WILMINGTON, N. C., OUT OF THE DARKNESS OF DISEASE TO AN ENVIABLE POSITION AS A CLEAN AND REAWAKENED CITY — AN AGGRESSIVE HEALTH OFFICER'S FIGHT, AGAINST A POLITICAL RING AND AGAINST PUBLIC APATHY, TO ENFORCE HEALTH ORDINANCES WHICH, UNDER HIS DIRECTION, HAVE ALMOST ELIMINATED TYPHOID FEVER FROM THE CITY

BY

FRANK PARKER STOCKBRIDGE

TWO years ago Wilmington, N. C., was one of the most unhealthy cities in the United States. With one or two exceptions it was, so far as statistical evidence showed, the most unhealthy city in the entire South. The proportion of communicable diseases to population was enormous; typhoid was endemic, prevailing the year around, and its death rate high; every other water-borne and filth-borne disease took an excessive toll of human lives.

To-day Wilmington is one of the healthiest cities in the South. It has a comparatively small amount of typhoid; its death rate is little more than that of New York, and conditions in these respects are steadily improving.

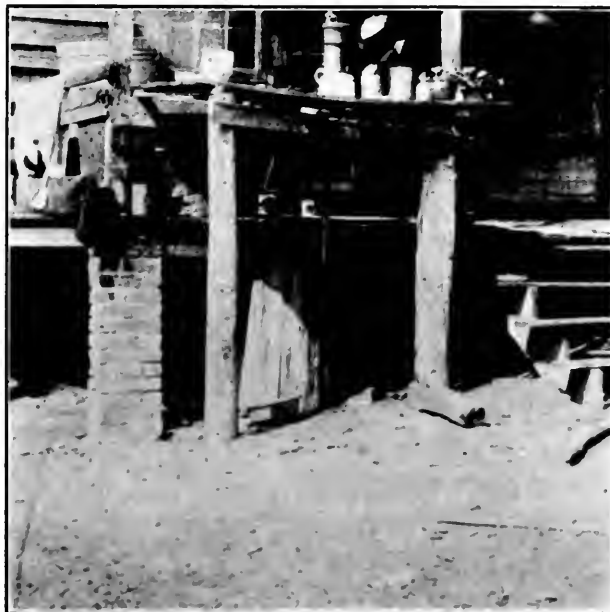
Two years ago, likewise, the political and moral conditions of Wilmington were bad. The municipal government was in the hands of a ring whose leaders were enriching themselves through their political power. Public improvements were at a standstill and the atmosphere reeked of graft. Although North Carolina is a prohibition state, saloons were running wide open in the city of Wilmington, with all the evils that usually accompany illegal liquor-selling.

To-day the saloons are closed, the social evil has been minimized, the political "boss" has been shorn of his power, public improvements are under way, and graft is conspicuous by its absence.

All this change has come, not by revolution, but by house cleaning.

The power of publicity stirred a lax public conscience into action.

One man, Dr. Charles T. Nesbitt, started the movement. One newspaper, the Wilmington *Dispatch*, backed him. Their joint efforts aroused the people of the city to action.



THE DEADLY SHALLOW WELL

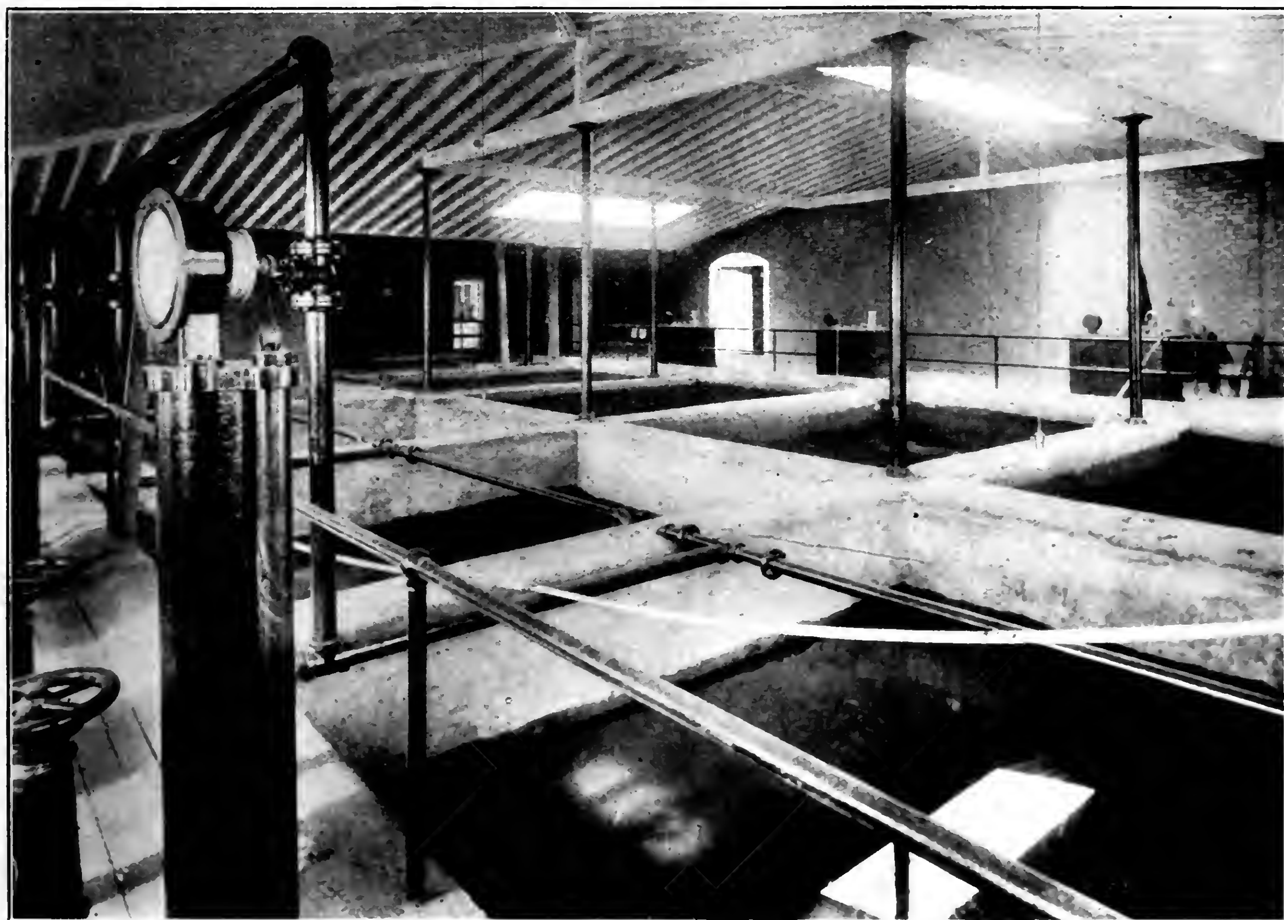
POLLUTED DAILY BY THE KITCHEN SLOPS THAT ARE THROWN OVER THE PORCH RAILING — THE ONLY WATER SUPPLY IN MANY HOMES

Wilmington, the

DR. CHARLES T. NESBITT

WHO IS WAGING A WINNING BATTLE AGAINST IGNORANCE AND INDIFFERENCE AND SELFISHNESS TO MAKE WILMINGTON, N. C., A SANITARY CITY BY CLEARING OUT TENEMENTS, CLEANING BACK YARDS, BUILDING DEEP SEWERS, AND REPLACING SHALLOW WELLS BY CONNECTIONS WITH THE MUNICIPAL WATER SYSTEM

largest city in North Carolina, might easily be, and in the course of time inevitably will be, one of the great cities of the South. Its harbor is one of the finest on the whole South Atlantic seaboard. All around the city lies a great expanse of splendid agricultural land, only partially developed, although Wilmington ships enormous quantities of garden products by water and rail to Baltimore, Philadelphia, and New York. It is one of the four or five greatest cotton-shipping merchant. Many other fine old houses, surrounded by brick-walled gardens and giving token, in their classic architecture, of their pre-Revolutionary history, line the principal residential streets. But one has to walk only a few blocks or turn the corner to discover filth and squalor almost intolerable in the sections occupied by the fourteen thousand Negroes who constitute almost an even half of the city's population. At least, that description was true up to a year or two ago.



WHERE PURE WATER IS PREPARED FOR ALL THE CITY

FILTERS IN THE MUNICIPAL WATER WORKS OF WILMINGTON THAT SUPPLY PLENTY OF PURE WATER AT LITTLE COST, A COST, HOWEVER, OFTEN TOO GREAT FOR PRIVATE SELFISHNESS TO PAY

points in the world. The headquarters of the Atlantic Coast Line Railroad, one of the three great railroad systems of the South, are at Wilmington, which thereby gives the city a commercial advantage of no mean importance.

Yet, with all these natural and acquired advantages, Wilmington has grown but slowly in its nearly two hundred years of existence. The stately brick mansion once occupied by the colonial governors of North Carolina is still the finest house in Wilmington, the home of its leading cotton

Four years ago Dr. Nesbitt, a native of Maryland, who had studied and practised his profession in New York, returned from a year of professional study in Europe and visited Wilmington. He liked the town, found it was not over-crowded with physicians, and decided to remain and practise there. As a preliminary to the practice of medicine he undertook a study of community health conditions.

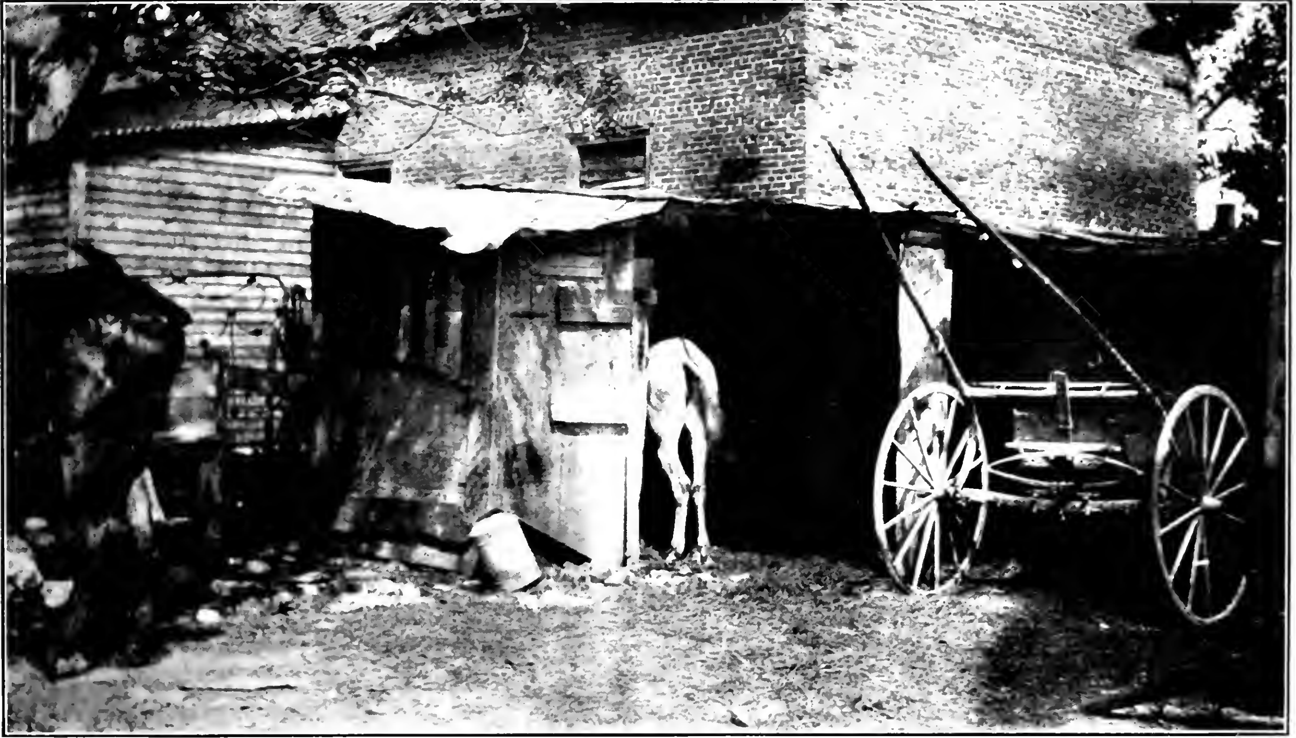
What he discovered appalled him.

From the incomplete and carelessly kept records of the city health department

he gathered enough information to convince him that Wilmington offered a splendid field for medical practice. Notwithstanding that reports of communicable diseases by physicians were the exception rather than the rule, and that even a considerable percentage of deaths occurred unrecorded, the evidence was there that typhoid, diphtheria, and malaria were a constant menace to the health and lives of whites and Negroes alike, and the frequent outbreaks of scarlet fever and other acute infections, spreading through considerable sections of the city, indicated inefficient sanitary control.

A MODEL DAIRY THAT SUPPLIES PURE MILK TO WILMINGTON

Searching farther, to discover the cause of these conditions, Dr. Nesbitt found it primarily to lie in the soil. Soil pollution in Wilmington, as elsewhere in the South, was a constant element that had been too little considered by sanitarians. There was a small and inadequate sewer system in Wilmington, owned by a private company, badly constructed and poorly maintained, with which less than one thousand of the more than six thousand houses in the city had connections. There was a city water supply, taken from the Cape Fear River, with a filtration and purification plant adequate, if properly managed, to insure the purity of the product, even though the intake was in dangerous proximity to the sewer outlet and below an open ditch into which many buildings, including a large hospital, drained their refuse. The plant was being operated without skilled supervision, however, and even such water as it supplied was available only to a portion of the city's people. In the outlying sections the poorer whites and the Negroes depended upon water obtained from surface wells, driven through the porous sandy soil to the underlying stratum of shell conglomerate or "Coquina," which not only prevented surface water from penetrating farther into the earth, but made it certain that all the water so obtained would be infected from the five thousand and more outdoor surface closets which were the only sanitary



A FILTHY STABLE THAT POLLUTED THE MILK IN WILMINGTON

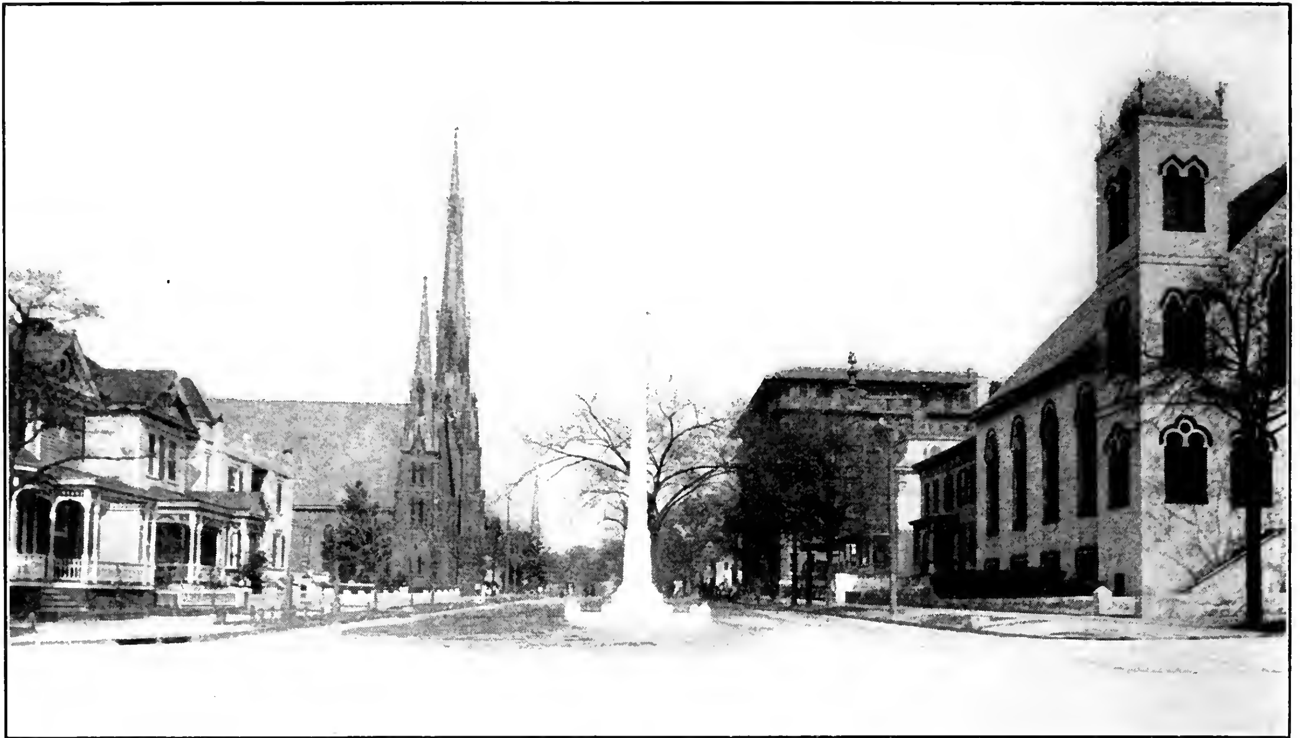
THE CITY MARKET IS JUST ACROSS THE STREET

conveniences in general use. The light, sandy soil on which the entire city is built gave the key to the whole sanitary problem of Wilmington and the answer to the questions which its death records aroused.

In his search for the causes underlying health conditions in Wilmington, Dr. Nesbitt came in contact with Dr. Charles W. Stiles, the discoverer of the hookworm disease in America. Dr. Stiles, at a meeting of the North Carolina State Medical Society, held at Wrightsville Beach in the summer of 1910, presented a paper which gave Dr. Nesbitt a new vista of the magnitude of the problem which he was attempting to solve. The deep impression

THE REAR OF A RESTAURANT THAT USED THE MILK

THE ENCLOSURE TO THE RIGHT WAS A SURFACE PRIVY THAT BRED FLIES IN THE MOST FERTILE MEDIUM FOR THE PROPAGATION OF TYPHOID GERMS



ONE OF THE TYPICAL CLEAN AND DIGNIFIED STREETS OF WILMINGTON AND —

made by Dr. Stiles's analysis of the effects of soil pollution led Dr. Nesbitt to make an exhaustive statistical investigation of local conditions.

The somewhat startling results of this research were presented by Dr. Nesbitt later in the summer of 1910 at a meeting of the local medical society, at which he called upon the other twenty-six physicians of the city and asked their coöperation in a movement to clean up Wilmington. Most of them were indifferent, some of them hostile, but half a dozen agreed to help. The meeting broke up in some confusion, but it had the result of fixing Dr. Nesbitt more firmly in his purpose of remaining in Wilmington.

The first thing needed, as Dr. Nesbitt saw it, was to educate the public to the actual conditions and the possible remedies. He laid the situation before the editor of the *Dispatch*, who also agreed to help. In a day or two the *Dispatch* printed the first of a series of articles in which the ascertainable facts as to health conditions in Wilmington, their cause, and possible remedial measures were set forth. Different diseases were taken up, statistics were given showing that with the exception of Raleigh, the state capital, nearly all the commoner diseases were more prevalent in Wilmington than anywhere else in the South. None of the articles was signed, but all but a very few of them were written by Dr. Nesbitt. He made no pretension to literary ability but he found that he was able to put into his newspaper articles the "punch" that makes for popularity.

The articles in the *Dispatch* attracted instant and wide-spread attention. Their first effect on the mass of the people of Wilmington was much the same as that of Dr. Nesbitt's statement of conditions upon some of the doctors. Like most other communities, Wilmington preferred to shut its eyes to unpleasant truths and die in peace, rather than to make the effort to live by recognizing and improving bad conditions. Besides, it was "hurting business." Many good and well-meaning people were indignant at what they regarded as "attacks" upon their city.

The editor of the *Dispatch*, Mr. James H. Cowan, proved to be of a heroic strain. Unmoved by popular clamor, he continued to print Dr. Nesbitt's articles and to defend them editorially. Other papers in North Carolina began to comment on them. The short-sighted people became more and more alarmed. The principal fear expressed was that, if it became known that typhoid was prevalent in Wilmington, tourists would stop coming to Wrightsville Beach, eight miles

away — and Wilmington makes money out of the tourists.

Dr. Nesbitt's statistics were challenged, especially in Raleigh, but finally Raleigh people did a little investigating and found that he was right so far as their city was concerned. Pretty soon Wilmington citizens began to investigate and were convinced that if there were any inaccuracies in the *Dispatch's* articles they were on the side of understatement. And in a comparatively short time — a very few months — nearly all the Wilmington people who were not tied up with the political ring were accepting the facts and clamoring for the application of the remedies which the articles had pointed out.

But there was the ring, and the ring thrived and profited and held its power by reason of the very conditions which must be changed if Wilmington was to prosper. The head of the ring, the political "boss" of Wilmington, Mr. John J. Furlong, gained his principal income, and a large one, from the contract awarded to him by the city authorities for cleaning the five thousand-odd surface closets.

The trouble was, he did not clean them. His collectors never failed to call for the twenty-five cents which every householder was required to pay for every cleaning, but the profit lay in doing the work superficially, irregularly, and, in many sections of the city, practically not at all.

The main demand of the people of Wilmington, stimulated by Dr. Nesbitt's articles, was for the extension of the sewer system and the abolition of these insanitary contrivances. That meant taking dollars out of the "boss's" own pocket — and the "boss" controlled the political machinery of the city. Moreover, there had been

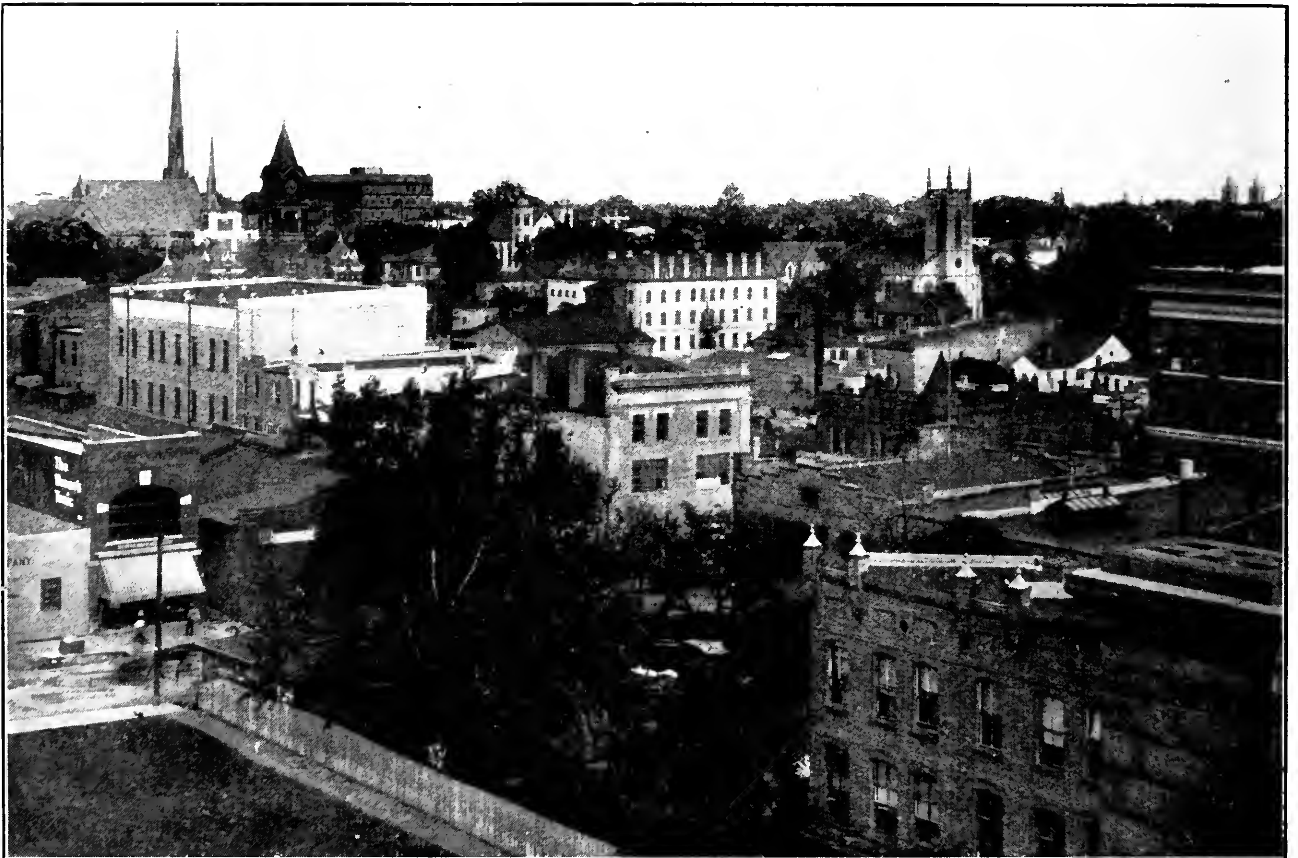
— ONE OF THE COMMON SIGHTS AROUND THE CORNER

SHOWING THE CHARACTERISTIC SURFACE PRIVY, SHALLOW WELL, AND SLOP-SOAKED EARTH OF THE NEGRO TENEMENTS THAT INFESTED EVEN THE BEST RESIDENTIAL AND BUSINESS DISTRICTS

many evidences that the old-fashioned form of city government which prevailed was badly adapted to getting anything of real value accomplished. For some time there had been an increasing agitation for a change in the form of government in Wilmington. The interest aroused over the city's health conditions gave a final fillip to the movement already under way for the adoption of the commission plan, and when the North Carolina Legislature met early in 1911 the people of Wilmington asked it for a new charter, which was granted, although the influence of the ring was strong enough to prevent the best form of commission government from being adopted. The five commissioners provided for, instead of being elected at large, were chosen by wards. They were given plenary powers to manage the city's affairs, and were made subject to recall.

The first set of commissioners, still in office, were elected in the spring of 1911. The "boss" and his ring succeeded in controlling the vote in two wards and putting their henchmen on the commission. In two other wards the commissioners chosen were distinctly progressive and representative of the new civic spirit in Wilmington. The fifth commissioner, holding the balance of power, was an unknown quantity to everybody.

The first test of the calibre of the new commission came at one of their early sessions when, without solicitation on his part, and very much to his surprise, Dr. Nesbitt was appointed City Superintendent of Health. He appeared before the commission and informed them that he would refuse the position unless he were given entire control of the sanitation of Wilmington and all the funds necessary with which to carry out a complete programme of sanitary betterment. These the commission promised.

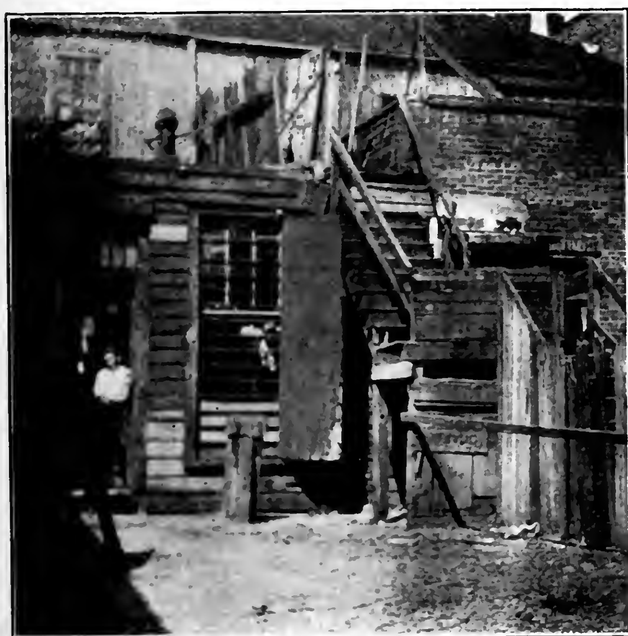


A BIRDSEYE VIEW OF THE BUSINESS SECTION OF WILMINGTON—

Dr. Nesbitt's first point of attack was on typhoid. He had concluded that much of it, practically all of it, was carried by flies. The story of his warfare on the fly, in which he sprinkled the whole town, throughout the summer of 1911, with pyroligneous acid, and reduced the disease to a minimum, was told at length in the WORLD'S WORK last spring. From among the men employed in this campaign against the typhoid fly, Dr. Nesbitt

organized a sanitary police force of seven members, put them in uniform, and started a systematic sanitary survey of the community. He found efficient assistance and support both inside and out of his official staff. Dr. Thomas B. Carroll, who had been milk and meat inspector for several years, became his right-hand man and a valuable adviser. Dr. John Thames was made Assistant Superintendent of Health and developed a positive genius for public health work which has rendered him invaluable. A Scotch engineer, Mr. John M. Mathers, who had had experience in sewer and water works construction and sanitary engineering on the other side of the ocean, "blew in" one day looking for a job. Dr. Nesbitt made him special inspector of the sanitary police. He took to the work like a duck to water and has been a power in the regeneration of Wilmington. In the office of the Health Department Dr. Nesbitt found Mr. Eben Piner, who had been a sea island fisherman before he moved to Wilmington. He had been chief sanitary inspector and general factotum for Dr. Nesbitt's predecessors, and the Doctor was warned that he must get rid of him or there would be two Superintendents of Health. What Dr. Nesbitt did was to put Piner into a uniform that invested his gigantic physique with new dignity, and gave him the title of Chief of the Sanitary Police. I doubt if there is any humanly possible task which Piner would not attempt if Dr. Nesbitt asked it of him, and his suggestions, based on his intimate knowledge of the city, have been invaluable.

One of the first things Dr. Nesbitt did on taking office was to study the existing health ordinances. They were a curious collection, some of them dating back to the very beginnings of Wilmington. Only two of them, so far as Dr. Nesbitt could find out, had ever been uniformly enforced. One of them imposed a penalty upon any one digging a hole of any size or kind in the ground between May and November, without permission of the Superintendent of Health. The other made it an offense to allow an ailantus tree to grow more than five feet high.



— AND A NEARER VIEW OF PORTIONS OF THE SAME SECTION
AT THE REAR OF TWO OF THE PRINCIPAL PROVISION STORES

"I figured out the reason for the hole-in-the-ground ordinance," Dr. Nesbitt told me when I visited Wilmington last November. "Of course, the idea was that to dig in the earth would release the 'miasma' which formerly was supposed to cause malaria. But the ailantus tree ordinance still has me guessing. As nearly as I can figure it out, this plant has at some time or other been given the attributes of the 'deadly upas tree,' which was anciently believed to cause disease and death to those seeking rest in its

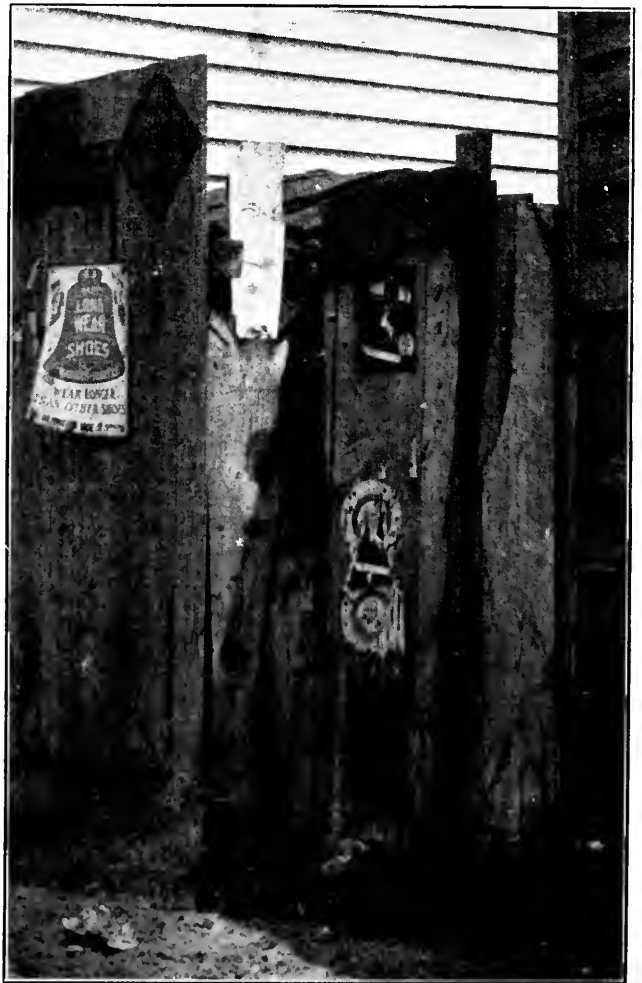
CANDY AND SEWAGE

THE BUILDING CONTAINED A CONFECTIONERY SHOP. THE DARK SPOT CONTAINED THE LEAKAGE OF A BURST SEWER

shade. Of course, a tree only five feet high, even a deadly upas tree, would hardly tempt one to seek shelter beneath its overhanging boughs."

Greatly to the encouragement of the good people of Wilmington, the city commission started out by giving Dr. Nesbitt everything he asked. They repealed a lot of the old, useless health regulations and adopted new ones adapted to modern conditions. Moreover, they gave him money and help enough to put the records of the office into intelligible shape.

Realizing that without public sentiment back of him he could accomplish nothing, Dr. Nesbitt from the beginning adopted the policy of taking the public into his confidence. Both of the newspapers of Wilmington were now friendly, and he saw to it that there was always some news in the health office for their reporters — usually all written out for them, to avoid the possibility of mistakes. And as soon as the records had been put into such shape that the public could understand them, the public was invited to come in and inspect them. The response was surprisingly large. Business and professional men whose interest had been aroused by the newspaper articles began to study the city's sanitary condition for themselves. They found in the health office all the information they could ask for. There were eleven maps of the city, one for each classified communicable disease, with the places where cases then existed marked with colored tacks. Previously an announcement of the prevalence of typhoid or diphtheria in the town had meant very little to the average inhabitant of one of the old colonial mansions. But when he could see from the health office chart that there were two or three cases in the same block with his home or that his house was completely surrounded by transmissible infections, vital statistics took on a little more personal interest.



PROVISIONS AND FILTH

THIS SURFACE PRIVY DISCHARGED ON A SIDEWALK BETWEEN TWO PROVISION STORES

Everything was reduced to maps and charts and diagrams. Here the draughtsmanship of Mather, the Scotch engineer, came into play. The physicians of Wilmington acquired the habit of complying with the laws requiring them to report all infectious cases, and began to recognize the value to the city of the work Dr. Nesbitt was doing. Occasionally a chart showing the decrease in the death rate or the prevalence of some disease would be exhibited in one of the show windows on Front Street, and the general public began to get the habit of studying these graphic illustrations of local conditions and commenting on them. They got the habit, too, of dropping in at the health office whenever they contemplated a change of domicile, for among the valuable statistics established by Dr. Nesbitt — an idea original with him — is a card index with a separate card for every building in the city, on which are recorded, besides such information as its location and owner, the facts as to the number of children of school age, boarders or roomers and other occupants; the sources of its water and milk supplies; proximity of stables, sanitary conveniences and sewer connections, and, most important of all, a compiete record of every case of contagious disease that has occurred on the premises in the previous two years. Hardly a day passes without a visit from some prospective tenant desiring a clean bill of health for the house he contemplates occupying, and calling on the Health Department for efficient disinfection if the record be bad.

The real things to be remedied, however, were the water supply and the sewerage system. There was nothing the matter with the water works plant except its management, so Dr. Nesbitt was informed by sanitary engineers whom he sent to inspect it. New methods of operating the filtration and purification processes were installed, a city chemist was appointed with the job of making a chemical and microscopical examination of the water three times a day as part of his regular work, and Wilmington began to get as good water as any city in America. Incidentally, much of the drainage into the source of water supply was stopped.

The sewer was a stumbling-block. It was entirely inadequate for the city's needs and, being owned by a private company, extensions to it were beyond the power of the authorities. The sewer company offered to sell at an exorbitant price. Dr. Nesbitt and his Scotch engineer, Mathers, made an exhaustive study of the sewer and reported its defects to the commissioners. Their report was afterward confirmed by an engineer of the State Board of Health, with the result that the city bought the sewer for considerably less than had been asked. Complete plans for a system of sewers to take in the whole city of Wilmington have since been prepared and adopted, and are about to be carried out. In the meantime, several hundred more buildings have been connected with the present sewer.

Until sewerage facilities are provided for all buildings and the water system extended to every house in Wilmington, however, there is still the problem of soil pollution. Very soon after taking office Dr. Nesbitt set about its solution. The first step was to insist upon the cancellation of the contract that was held by "Boss" Furlong.

Here the sanitary police had a chance to make a record and they made it. Evidence was collected that proved that in a large number of cases money had been collected from householders by the contractor for sanitary services which had never been performed and for which he had also presented bills to the city, and when this evidence was presented to the commissioners they finally, in spite of his violent protests, cancelled the contract and turned over the work of scavenging to the Health Department.

It must not be thought that this and the other sanitary reforms which Dr. Nesbitt introduced as rapidly as it was possible to do so were accomplished without trouble. The political ring of Wilmington did not stand idly by and see its spoils taken away from it without a protest. But its leaders were too crafty to make a public grievance of the deprivation of their profits. Even a corrupt political organization must have some semblance of public sentiment back of it, so they made Dr.

Nesbitt and his Health Department the objects of attack on other grounds.

There were many perfectly honorable citizens who couldn't see the use, for instance, of an ordinance forbidding any one to keep more than one cow in the city limits and that one in a sanitary stable. Many were aggrieved at the proposal to exclude all hogs from the town. There were others who had cheerfully paid the "boss" for having their premises cleaned up — without getting them cleaned — who felt aggrieved at having to pay a sanitary tax of $4 a year for really efficient service in caring for the sanitary closets which Dr. Nesbitt had begun to install and by which he had replaced nearly half of the objectionable ones. There were others who had other grievances. It seemed like nonsense to some that Dr. Nesbitt should insist upon efficient milk inspection, instead of the practice which formerly prevailed of insuring a uniform quality for all the milk sold in the city by dumping it all into a common container, the good with the bad, whence it was dispensed in any convenient way. To still others it seemed an injustice to compel the local butchers to close up their insanitary slaughter houses and do their slaughtering in the woods outside of the city until they could rebuild their abattoirs under more sanitary conditions. A large proportion of the dealers in foodstuffs who had been compelled to screen their stores and counters and keep their premises cleaned up also felt aggrieved. So, too, did a large proportion of the Negro population after, upon the first outbreak of smallpox among them, Dr. Nesbitt had sent out his assistant and a squad of the sanitary police to vaccinate every Negro who might be exposed to infection.

Among all these and the always existent element in every community who are constitutionally against the government at all times, it was not difficult for the "boss" and his henchmen to stir up the semblance of popular indignation against the Health Department. At first there were vague mutterings, gradually increasing, until, only a few months after he had taken office, Dr. Nesbitt and his doings became the principal topic of conversation in Wilmington. Everybody took the side for or against him. His opponents were, of course, the loudest and most persistent, and any casual visitor in Wilmington might easily have gained the impression that he was the most-hated man in the community.

Through it all he avoided quarrels and never appeared in public without his smile. He never allowed himself to be drawn into a public argument but kept on asking the commissioners for new health ordinances and enforcing the ones he had already obtained. The ring grew desperate. When they thought they had aroused public sentiment sufficiently they called a mass meeting at the Court House. All the disorderly elements of Wilmington turned out, as well as the good people who thought they had grievances, and speeches were made demanding the recall of the commissioners who were backing Dr. Nesbitt. A recall petition was prepared and signed by almost enough voters to demand a new election. Threats of personal violence against Dr. Nesbitt were openly made, but if he was afraid he didn't show it.

There were more mass meetings and more talk of violence and more threats of recall. Some of the commissioners began to get worried. Then Dr. Nesbitt's friends and the friends of good government began to make their influence felt. One night there was to have been a mass meeting, but when the crowd began to arrive at the Court House they found the doors locked and the building dark, the organizers of the meeting having neglected to notify the janitor of the event. By this time a good many of Dr. Nesbitt's critics were beginning to see that he was right and the true inwardness of the recall talk was becoming understood. There were no more mass meetings and there has been no active recall agitation since, although the commissioners, somewhat alarmed by the talk, were not quite as enthusiastic in supporting the work of the health office as they had been.

The final blow which loosened the grip of the "boss" upon the city was dealt in the summer of 1912 when, upon application to the Governor by the Good Government League, Hon. Frank Carter was sent

to Wilmington to preside at a term of the Superior Court. The Court of first instance in Wilmington, the Recorder's Court, was presided over by the "boss" himself. Scores of cases in which offenders had been let off with the minimum penalty by the Recorder were cited to Judge Carter, and the session resolved itself into what amounted practically to an indignation meeting, in which Court, bar, and the public generally took occasion to express the candid opinions of the decent element of Wilmington concerning "Boss" Furlong, his court, and his methods. The moral effect of this public exposure was immediate and apparently lasting. The "boss" appears to have resigned himself to the inevitable. That some of his former decisions were not entirely due to ignorance (his legal knowledge was acquired while working at his trade as a foundryman) but to some other cause, appears to be demonstrated by the fact that, although he has not since taken a course in law, he is now rendering judicial service which is not subject to criticism.

The health commission has taken effective action in many directions that has made for the purification of Wilmington. An ordinance placing the so-called "soft drink" bars—which were really saloons dispensing liquor in defiance of the prohibition laws — under Dr. Nesbitt's control as to sanitary condition was adopted. There was no possibility of concealing the nature of the business conducted in these places from the sanitary police — and such business does not flourish in the light. The saloons began to close up or obey the law. The police, encouraged by the loosening of the ring's grip, began to drive the loose women out of the town and to inquire seriously into violations of the prohibition law. Wilmington was cleaning house.

Side by side with the improvement in public health and morals, Wilmington is carrying out a progressive policy of public improvements in other directions. Many of its streets have been paved, a new school building that is a model of its kind has been built, and there are other evidences of a rejuvenated civic pride. Of course, no one man has done it all — it has been done by the people of Wilmington, who have shown that, once aroused to a realization of conditions, they are prompt to apply the remedy. There are many good people in Wilmington who are not ready to give credit to Dr. Nesbitt for anything more than the things he has accomplished since he went into office, although I found many who admitted that the public interest aroused by his exposures in the *Dispatch* of the insanitary condition of the city did more than anything else to crystallize a growing popular unrest into action. And there is no question about the efficiency of his work in office, the details of which have only scantily been outlined. Wilmington is putting in a garbage incinerator, for one thing. The methods of caring for the indigent sick have been revolutionized, discouraging malingerers and giving the really ill adequate care and support. Quarantine laws and regulations are being strictly enforced, and in almost every respect Wilmington now comes near being a model city from the point of view of the public health. Dr. Nesbitt's methods of records and administration, worked out to meet pressing local needs, have been studied by sanitary experts from many other cities and declared to be far in advance of the prevailing practice in America and even in most of Europe.

There is still a tremendous amount of work to be done before Wilmington will be as clean and as healthful as a town with its natural advantages ought to be. There is still a great deal of work begun by Dr. Nesbitt which is not completed. He is trying to get the physicians to report all cases of tuberculosis, a disease that still evades the vigilance of the Health Department. The new sewer system is still in the air instead of under ground. The rebuilding of the public market, one of the biggest things undertaken, is still under way. The inspection of plumbing — a novelty in Wilmington until Dr. Nesbitt introduced it — has not been completed, and a large proportion of the people are still drinking water from surface wells. But on the whole a tremendous improvement has been made in two years — probably a more revolutionary sanitary reform than has been carried out this side of Havana or the Canal Zone in a similar period.

THE NEW FREEDOM

A CALL FOR THE EMANCIPATION OF THE GENEROUS ENERGIES OF A PEOPLE

BY

WOODROW WILSON

III

MONOPOLY, OR OPPORTUNITY?

GENTLEMEN say, they have been saying for a long time, and therefore I assume that they believe, that trusts are inevitable. They don't say that big business is inevitable. They don't say merely that the elaboration of business upon a great coöperative scale is characteristic of our time and has come about by the natural operation of modern civilization. We would admit that. But they say that the particular kind of combinations that are now controlling our economic development came into existence naturally and were inevitable; and that, therefore, we have to accept them as unavoidable and administer our development through them. They take the analogy of the railways. The railways were clearly inevitable if we were to have transportation, but railways after they are once built stay put. You can't transfer a railroad at convenience: and you can't shut up one part of it and work another part. It is in the nature of what economists, those tedious persons, call natural monopolies; simply because the whole circumstances of their use are so stiff that you can't alter them. Such are the analogies which these gentlemen choose when they discuss the modern trust.

I admit the popularity of the theory that the trusts have come about through the natural development of business conditions in the United States; and that it is a mistake to try to oppose the processes by which they have been built up, because those processes belong to the very nature of business in our time; and that therefore the only

thing we can do, and the only thing we ought to attempt to do, is to accept them as inevitable arrangements and make the best out of it that we can by regulation.

I answer, nevertheless, that this attitude rests upon a confusion of thought. Big business is no doubt to a large extent necessary and natural. The development of business upon a great scale, upon a great scale of coöperation, is inevitable, and, let me add, is probably desirable. But that is a very different matter from the development of trusts, because the trusts have not grown. They have been artificially created, they have been put together, not by natural processes, but by the will, the deliberate planning will, of men who were more powerful than their neighbors in the business world, and who wished to make their power secure against competition.

The trusts do not belong to the period of infant industries. They are not the products of the time, that old laborious time, when the great continent we live on was undeveloped, the young Nation struggling to find itself and get upon its feet amidst older and more experienced competitors. They belong to a very recent and very sophisticated age, when men knew what they wanted and knew how to get it by the favor of the Government.

Did you ever look into the way a trust is made? It is very natural, in one sense, in the same sense in which human greed is natural. If I haven't efficiency enough to beat my rivals, then the thing I am inclined to do is to get together with my rivals and say: "Don't let's cut one another's throats; let's combine and determine prices for ourselves; determine the output, and thereby determine the prices; and dominate and control the market." That is very natural. That has been done ever since freebooting was established. That has been done ever since power was used to establish control. The reason that the masters of combination have sought to shut out competition is that the basis of control under competition is brains and efficiency. I admit that any large corporation built up by the legitimate processes of business, by economy, by efficiency, is natural; and I am not afraid of it, no matter how big it grows. It can stay big only by doing its work more thoroughly than anybody else. And there is a point of bigness — as every business man in this country knows, though some of them will not admit it — where you pass the limit of efficiency and get into the region of clumsiness and unwieldiness. You can make your combine so extensive that you can't digest it into a single system; you can get so many parts that you can't assemble them as you would

an effective piece of machinery. The point of efficiency is overstepped in the natural process of development, oftentimes, and it has been overstepped many times in the artificial and deliberate formation of trusts.

A trust is formed in this way: a few gentlemen "promote" it, that is to say, they get it up, being given enormous fees for their kindness, which fees are loaded on to the undertaking in the form of securities of one kind or another. The argument of the promoters is, not that every one who comes into the combination can carry on his business more efficiently than he did before; the argument is: we will assign to you as your share in the pool, twice, three times, four times, or five times what you could have sold your business for to an individual competitor who would have to run it on an economic and competitive basis. We can afford to buy it at such a figure because we are shutting out competition. We can afford to make the stock of the combination half a dozen times what it naturally would be and pay dividends on it, because there will be nobody to dispute the prices we shall fix.

Talk of that as sound business? Talk of that as inevitable? It is based upon nothing except power. It is not based upon efficiency. It is no wonder that the big trusts are not prospering in proportion to such competitors as they still have in such parts of their business as competitors have access to; they are prospering freely only in those fields to which competition has no access. Read the statistics of the Steel Trust, if you don't believe it. Read the statistics of any trust. They are constantly nervous about competition, and they are constantly buying up new competitors in order to narrow the field. The United States Steel Corporation is gaining in its supremacy in the American market only with regard to the cruder manufactures of iron and steel, but wherever, as in the field of more advanced manufactures of iron and steel, it has important competitors, its portion of the product is not increasing, but is decreasing, and its competitors, where they have a foothold, are often more efficient than it is.

Why? Why, with unlimited capital and innumerable mines and plants everywhere in the United States, can't they beat the other fellows in the market? Partly because they are carrying too much. Partly because they are unwieldy. Their organization is imperfect. They bought up inefficient plants along with efficient, and they have got to carry what they have paid for, even if they have to shut some of the plants up in order to make any interest on their investments; or rather, not interest on their investments, because that is an incorrect

word — on their alleged capitalization. Here we have a lot of giants staggering along under an almost intolerable weight of artificial burdens, which they have put on their own backs, and constantly looking about lest some little pigmy with a round stone in a sling may come out and slay them.

For my part, I want the pigmy to have a chance to come out. And I foresee a time when the pigmies will be so much more athletic, so much more astute, so much more active, than the giants, that it will be a case of Jack the giant-killer. Just let some of the youngsters I know have a chance and they'll give these gentlemen points. Lend them a little money! They can't get any now. See to it that when they have got a local market they can't be squeezed out of it. Give them a chance to capture that market and then see them capture another one and another one, until these men who are carrying an intolerable load of artificial securities find that they have got to get down to hard pan to keep their foothold at all. I am willing to let Jack come into the field with the giant, and if Jack has the brains that some Jacks that I know in America have, then I should like to see the giant get the better of him, with the load that he, the giant, has to carry — the load of water! For I'll undertake to put a water-logged giant out of business any time, if you will give me a fair field and as much credit as I am entitled to, and let the law do what from time immemorial law has been expected to do — see fair play.

As for watered stock, I know all the sophistical arguments, and they are many, for capitalizing earning capacity. It is a very attractive and interesting argument, and in some instances it is legitimately used. But there is a line you cross, above which you are not capitalizing your earning capacity, but capitalizing your control of the market, capitalizing the profits which you got by your control of the market and didn't get by efficiency and economy. These things are not hidden even from the layman. They are not half hidden from college men. The college men's days of innocence have passed, and their days of sophistication have come. They know what is going on, because we live in a talkative world, full of statistics, full of congressional inquiries, full of trials of persons who have attempted to live independently of the statutes of the United States; and so a great many things have come to light under oath, which we must believe upon the credibility of the witnesses, who are, indeed, in many instances very eminent and respectable witnesses.

I take my stand absolutely, where every progressive ought to take his stand, on the proposition that private monopoly is indefensible

and intolerable. And there I will fight my battle. And I know how to fight it. Everybody who has even read the newspapers knows the means by which these men built up their power and created these monopolies. Any decently equipped lawyer can suggest to you statutes by which the whole business can be stopped. What these gentlemen do not want is this: they do not want to be compelled to meet all comers on equal terms. I am perfectly willing that they should beat any competitor by fair means; but I know the foul means they have adopted, and I know that they can be stopped by law. If they think that, coming into the market upon the basis of mere efficiency, upon the mere basis of knowing how to manufacture goods better than anybody else and to sell them cheaper than anybody else, they can carry the immense amount of water that they have put into their enterprises in order to buy up rivals, then they are perfectly welcome to try it.

But there must be no squeezing out of the beginner, no crippling of his credit; no discrimination against retailers who buy from a rival; no threats against concerns who sell supplies to a rival; no holding back of raw material from him; no secret arrangements against him. All the fair competition you choose, but no unfair competition of any kind. And then when unfair competition is eliminated, let us see these gentlemen carry their tanks of water on their backs. All that I ask and all I shall fight for is that they shall come into the field against merit and brains everywhere. If they can beat other American brains, then they have got the best brains.

But if you want to know how far brains go, as things now are, suppose you try to match your better wares against these gentlemen, and see them undersell you before your market is any bigger than the locality and make it absolutely impossible for you to get a fast foothold. If you want to know how brains count, originate some invention which will improve the kind of machinery they are using, and then see if you can borrow enough money to manufacture it. You may be offered something for your patent by the corporation — which will perhaps lock it up in a safe and go on using the old machinery; but you will not be allowed to manufacture. I know men who have tried it, and they could not get the money, because the great money-lenders of this country are in the arrangement with the great manufacturers of this country, and they do not propose to see their control of the market interfered with by outsiders. And who are outsiders? Why, all the rest of the people of the United States are outsiders.

They are rapidly making us outsiders with respect even of the

things that come from the bosom of the earth and that belong to us in a peculiar sense. Certain monopolies in this country have gained almost complete control of the raw material, chiefly in the mines, out of which the great body of manufactures are carried on, and they now discriminate, when they will, in the sale of that raw material between those who are rivals of the monopoly and those who submit to the monopoly. We must soon come to the point where we shall say to the men who own these essentials of industry that they have got to part with these essentials by sale to all citizens of the United States with the same readiness and upon the same terms. Or else we shall tie up the resources of this country under private control in such fashion as will make our independent development absolutely impossible.

There is another injustice that monopoly engages in. The trust that deals in the cruder products which are to be transformed into the more elaborate manufactures often will not sell these crude products except upon the terms of monopoly; that is to say, the people that deal with them must buy exclusively from them. And so again you have the lines of development tied up and the connections of development knotted and fastened so that you cannot wrench them apart.

Again, the manufacturing monopolies are so interlaced in their personal relationships with the great shipping interests of this country and with the great railroads that they can often largely determine the rates of shipment.

The people of this country are being very subtly dealt with. You know, of course, that, unless our Commerce Commissions are absolutely sleepless, you can get rebates without calling them such at all. The most complicated study I know of is the classification of freight by the railway company. If I wanted to make a special rate on a special thing, all I should have to do is to put it in a special class in the freight classification, and the trick is done. And when you reflect that the twenty-four men who control the United States Steel Corporation, for example, are either presidents or vice-presidents or directors in 55 per cent. of the railways of the United States, reckoning by the valuation of those railroads and the amount of their stock and bonds, you know just how close the whole thing is knitted together in our industrial system, and how great the temptation is. These twenty-four gentlemen administer that corporation as if it belonged to them. The amazing thing to me is that the people of the United States have not seen that the administration of a great business like that is not a private affair; it is a public affair.

I have been told by a great many men that the idea I have, that

by restoring competition you can restore industrial freedom, is based upon a failure to observe the actual happenings of the last decades in this country; because, they say, it is just free competition that has made it possible for the big to crush the little.

I reply, it is not free competition that has done that; it is illicit competition. It is competition of the kind that the law ought to stop, and can stop — this crushing of the little man.

You know, of course, how the little man is crushed by the trusts. He gets a local market. The big concerns come in and undersell him in his local market, and that is the only market he has; if he cannot make a profit there, he is killed. They can make a profit all through the rest of the Union while they are underselling him in his locality and recouping themselves by what they can earn elsewhere. Thus their competitors can be put out of business, one by one, wherever they dare to show a head. Inasmuch as they rise up only one by one, these big concerns can see to it that new competitors never come into the larger field. You have to begin somewhere. You can't begin in space. You can't begin in an airship. You have got to begin in some community. Your market has got to be your neighbors first and those who know you there. But unless you have unlimited capital (which of course you wouldn't have when you were beginning) or unlimited credit (which these gentlemen can see to it that you shan't get), they can kill you out in your local market any time they try, on the same basis exactly as that on which they beat organized labor; for they can sell at a loss in your market because they are selling at a profit everywhere else, and they can recoup the losses by which they beat you by the profits which they make in fields where they have beaten other fellows and put them out. If ever a competitor who by good luck has plenty of money does break into the wider market, then the trust has to buy him out, paying three or four times what his business was worth. Following such a purchase it has got to pay the interest on the price it has paid for the business, and it has got to tax the whole people of the United States, in order to pay the interest on what it borrowed to do that, or on the stocks and bonds it issued to do it with. Therefore the big trusts, the big combinations, are the most wasteful, the most uneconomical, and, after they pass a certain size, the most inefficient way of conducting the industries of this country.

A notable example is the way in which Mr. Carnegie was bought out of the steel business. Mr. Carnegie could build better mills and make better steel rails and make them cheaper than anybody else

connected with what afterward became the United States Steel Corporation. They didn't dare leave him outside. He had so much more brains in finding out the best processes; he had so much more shrewdness in surrounding himself with the most successful assistants; he knew so well when a young man that came into his employ was fit for promotion and was ripe to put at the head of some branch of his business and was sure to make good, that he could undersell every mother's son of them in the market for steel rails. And they bought him out at a price that amounted to three or four times — I believe actually five times — the estimated value of his properties and of his business, because they couldn't beat him in competition. And then in what they charged afterward for their product — the product of his mills included — they made us pay the interest on the four or five times the difference.

That is the difference between a big business and a trust. A trust is an arrangement to get rid of competition, and a big business is a business that has survived competition by conquering in the field of intelligence and economy. A trust does not bring efficiency to the aid of business; it buys efficiency out of business. I am for big business, and I am against the trusts. Any man who can survive by his brains, any man who can put the others out of the business by making the thing cheaper to the consumer at the same time that he is increasing its intrinsic value and quality, I take off my hat to, and I say: "You are the man who can build up the United States, and I wish there were more of you."

There will not be more, unless we find a way to prevent monopoly. You know perfectly well that a trust business staggering under a capitalization many times too big is not a business that can afford to admit competitors into the field; because the minute an economical business, a business with its capital down to hard pan, with every ounce of its capital working, comes into the field against such an over-loaded corporation, it will inevitably beat it and undersell it; therefore it is to the interest of these gentlemen that monopoly be maintained. They cannot rule the markets of the world in any way but by monopoly. It is not surprising to find them helping to found a new party with a fine programme of benevolence, but also with a tolerant acceptance of monopoly.

There is another matter to which we must direct our attention, whether we like or not. I do not take these things into my mouth because they please my palate; I do not talk about them because I

want to attack anybody or upset anything; I talk about them because only by open speech about them among ourselves shall we learn what the facts are.

You will notice from a recent investigation that things like this take place: A certain bank invests in certain securities. It appears from evidence that the handling of these securities was very intimately connected with the maintenance of the price of a particular commodity. Nobody ought, and in normal circumstances nobody would, for a moment think of suspecting the managers of a great bank of making such an investment in order to help those who were conducting a particular business in the United States to maintain the price of their commodity; but the circumstances are not normal. It is beginning to be believed that in the big business of this country nothing is disconnected from anything else. I do not mean in this particular instance to which I have referred, and I do not have in mind to draw any inference at all, for that would be unjust; but take any investment of an industrial character by a great bank. It is known that the directorate of that bank interlaces in personnel with ten, twenty, thirty, forty, fifty, sixty boards of directors of all sorts, of railroads which handle commodities, of great groups of manufacturers which manufacture commodities, and of great merchants who distribute commodities; and the result is that every great bank is under suspicion with regard to the motive of its investment. It is at least considered possible that it is playing the game of somebody who has nothing to do with banking, but with whom some of its directors are connected and joined in interest. The ground of unrest and uneasiness, in short, on the part of the public at large, is the growing knowledge that many large undertakings are interlaced with one another, indistinguishable from one another in personnel.

Therefore, when a small group of men approach Congress in order to induce the committee concerned to concur in certain legislation, nobody knows the ramifications of the interests which those men represent; there seems no frank and open action of public opinion in public counsel, but every man is suspected of representing some other man and it is not known where his connections begin or end.

I am one of those who have been so fortunately circumstanced that I have had the opportunity to study the way in which these things come about in complete disconnection from them, and I do not suspect that any man has deliberately planned the system. I am not so uninstructed and misinformed as to suppose that there is a deliberate and malevolent combination somewhere to dominate the Government

of the United States. I merely say that, by certain processes, now well known, and perhaps natural in themselves, there has come about an extraordinary and very sinister concentration in the control of business in the country.

However it has come about, it is more important still that the control of credit also has become dangerously centralized. It is the mere truth to say that the financial resources of the country are not at the command of those who do not submit to the direction and domination of small groups of capitalists who wish to keep the economic development of the country under their own eye and guidance. The great monopoly in this country is the monopoly of big credits. So long as that exists, our old variety and freedom and individual energy of development are out of the question. A great industrial nation is controlled by its system of credit. Our system of credit is privately concentrated. The growth of the Nation, therefore, and all our activities, are in the hands of a few men who, even if their action be honest and intended for the public interest, are necessarily concentrated upon the great undertakings in which their own money is involved and who necessarily, by very reason of their own limitations, chill and check and destroy genuine economic freedom. This is the greatest question of all, and to this statesmen must address themselves with an earnest determination to serve the long future and the true liberties of men.

This money trust, or as it should be more properly called, this credit trust, of which Congress has begun an investigation, is no myth; it is no imaginary thing. It is not an ordinary trust like another. It doesn't do business every day. It does business only when there is occasion to do business. You can sometimes do something large when it isn't watching, but when it is watching, you can't do much. And I have seen men squeezed by it; I have seen men who, as they themselves expressed it, were "put out of business by Wall Street," because Wall Street found them inconvenient and didn't want their competition.

Let me say again that I am not impugning the motives of the men in Wall Street. They may think that that is the best way to create prosperity for the country. When you have got the market in your hand, does honesty oblige you to turn the palm upside down and empty it? If you have got the market in your hand and believe that you understand the interest of the country better than anybody else, is it patriotic to let it go? I can imagine them using this argument to themselves.

The dominating danger in this land is not the existence of great individual combinations — that is dangerous enough in all conscience — but the combination of the combinations of the railways, the manufacturing enterprises, the great mining projects, the great enterprises for the development of the natural water-powers of the country, threaded together in the personnel of a series of boards of directors into a "community of interest" more formidable than any conceivable single combination that dare appear in the open.

The organization of business has become more centralized, vastly more centralized, than the political organization of the country itself. Corporations have come to cover greater areas than states; have come to live under a greater variety of laws than the citizen himself, have excelled states in their budgets and loomed bigger than whole commonwealths in their influence over the lives and fortunes of entire communities of men. Centralized business has built up vast structures of organization and equipment which overtop all states and seem to have no match or competitor except the federal Government itself.

What we have got to do — and it is a colossal task not to be undertaken with a light head or without judgment — what we have got to do is to disentangle this colossal "community of interest." No matter how we may purpose dealing with a single combination in restraint of trade, you will agree with me in this — that no single, avowed combination is big enough for the United States to be afraid of; but when all the combinations are combined and this final combination is not disclosed by any process of incorporation or law but is merely an identity of personnel or of interest, then there is something that even the Government of the Nation itself might come to fear — something for the law to pull apart, and gently, but firmly and persistently, dissect.

You know that the chemist distinguishes between a chemical combination and an amalgam. A chemical combination has done something which I cannot scientifically describe, but its molecules have become intimate with one another and have practically united, whereas an amalgam has a mere physical union created by pressure from without. Now, you can destroy that mere physical contact without hurting the individual elements, and this community of interest is an amalgam; you can break it up without hurting any one of the single interests combined. Not that I am particularly delicate of some of the interests combined — I am not under bonds to be unduly polite to them — but I am interested in the business of the coun-

try, and believe its integrity depends upon this dissection. I do not believe any one group of men has vision enough or genius enough to determine what the development of opportunity and the accomplishment by achievement shall be in this country.

The facts of the situation amount to this: that a comparatively small number of men control the raw material of this country; that a comparatively small number of men control the water-powers that can be made useful for the economical production of the energy to drive our machinery; that that same number of men largely control the railroads; that by agreements handed around among themselves they control prices, and that that same group of men control the larger credits of the country.

When we undertake the strategy which is going to be necessary to overcome and destroy this far-reaching system of monopoly, we are rescuing the business of this country, we are not injuring it; and when we separate the interests from each other and dismember these communities of connection, we have in mind a greater community of interest, a vaster community of interest, the community of interest that binds the virtues of all men together, that community of mankind which is broad and catholic enough to take under the sweep of its comprehension all sorts and conditions of men; that vision which sees that no society is renewed from the top and every society is renewed from the bottom. Limit opportunity, restrict the field of originative achievement, and you have cut out the heart and root of all prosperity.

The only thing that can ever make a free country is to keep a free and hopeful heart under every jacket in it. Honest American industry has always thriven, when it has thriven at all, on freedom; it has never thriven on monopoly. It is a great deal better to shift for yourselves than to be taken care of by a great combination of capital.

I, for my part, do not want to be taken care of. I would rather starve a free man than be fed a mere thing at the caprice of those who are organizing American industry as they please to organize it. I know, and every man in his heart knows, that the only way to enrich America is to make it possible for any man who has the brains to get into the game. I am not jealous of the size of any business that has *grown* to that size. I am not jealous of any process of growth, no matter how huge the result, provided the result was indeed obtained by the processes of wholesome development, which are the processes of efficiency, of economy, of intelligence, and of invention.

THE RACE FOR FEDERAL JOBS

TEN THOUSAND POSITIONS WITH WHICH PRESIDENT WILSON MUST FEED THE HUNGRY MULTITUDES OF DEMOCRATIC OFFICE SEEKERS — HOW THE CIVIL SERVICE HAS REDUCED PATRONAGE — COMEDIES AND TRAGEDIES OF JOB HUNTING

BY

ROBERT WICKLIFFE WOOLLEY

"YOU look anxious, Mr. President," said a friend, meeting Mr. Lincoln one day during the Civil War. "Is there bad news from the front?"

"No," answered the President, "it isn't the war; it's that postmastership at Brownsville, Ohio."

Hon. James Bryce uses this story in his "American Commonwealth" to illustrate the plight in which the Chief Magistrate of our country is placed by the mandatory exercise of the appointive power. It gives only a faint idea of what is in store for President Wilson.

According to the calendar, the Democrats will have been away from the "pie counter" sixteen years on March 4th, but about a million hungry believers in the doctrines of Thomas Jefferson and in the practices of Andrew Jackson, whom Grover Cleveland — peace to his ashes — did not serve, have fairly convincing proof that the period of waiting antedates the Civil War. Add to this horde a thousand or more regiments of younger patriots yearning for the spoils of victory, bear in mind that in all the great departments at Washington there have been none but self-confessed Democrats since November 5th, then consider that there are only 10,121 appointments to be made by the President "with the advice and consent of the Senate" and only 993 appointments to be made by the President "without confirmation by the Senate," and you will have a fairly good idea of Mr. Wilson's predicament.

Though he is not to be President until March 4th, though he will have no patronage to dispense until he shall have taken the oath of office, and though precedent and good taste forbid that he should announce any except appointments to his Cabinet before his inauguration, office seekers began to swarm to Washington immediately upon receipt of news of a Democratic victory, and they will continue to assemble there until the last place has been filled — until the few have been chosen. Even then will the many linger, every one of them hoping that the improbable will happen — that a chance appointment will come his way.

It is refreshing to learn from these early arrivals that none considers himself an ordinary job-hunter. Far from it! On the contrary, every one would have you know that he has the endorsement of a Senator and a Representative in writing, half a dozen glowing letters from the leading citizens of his home town, a letter of introduction from a former classmate of Woodrow Wilson, and that, as a clincher, any number of Princeton graduates "who had the good fortune to be intimately associated with the President while they were students under him, etc." hold themselves ready to come to Washington at a moment's notice.

Of course, this notice will not be necessary! How can President Wilson fail to act favorably when confronted with such testimonials? They are the chosen few! Their only reason for arriving ahead of time is to see whether they like the town or prefer to accept important diplomatic or consular posts! Please bear in mind that they are to "accept," not to "seek;" that they are to fill "important posts," never to "land jobs."

The first "early bird" to come under my observation was the owner of a daily news-

paper in the West. Away back in August he saw how things were going and served notice on the National Committee about as follows:

> I am doing all I can for the ticket. We are going to win and I want to let you know what my ambition is. I would prefer to be Director of the Bureau of the Census, realizing that my experience peculiarly fits me for this job. But the competition for it will doubtless be keen. If it cannot be landed, I will be content to accept an assistant secretaryship of the Treasury.

His letter was only one of thousands, seeking information and indicating political hopes, which came to my desk and to the desks of other heads of bureaus and committees at the Democratic National Headquarters in New York. This man made two serious mistakes. First, his letter gave the impression that he expected an office in return for his support of Wilson and Marshall; second, he acted upon the presumption that the posts worth while at Washington will go to those who seek them. President Wilson does not consider that the Democratic Party has any bills outstanding, payable for services rendered, and in filling every important post in the several great departments he will seek the man.

"The Democrats did well for the country but they played the devil for Woodrow Wilson and myself," said Congressman Carlin, of Virginia, to me a few days after the election. Mr. Carlin's district lies just across the Potomac from Washingon and there is never a time when he has not on file applications of constituents, backed with glowing endorsements, for every office in the gift of the President. And he stands ready to insure his own reëlection in November, 1914, by filling the entire list on a moment's notice.

But demonstration, on paper or otherwise, that the prizes are few and the ambitious legion, does no good. The multitude will swarm to the White House just the same and the President, who desires to do away, as far as possible, with red tape and circumstance, will be chased from the "open door" to the "storm cellar." Artemus Ward's description of the flight of Mr. Lincoln from bed-chamber to bed-chamber, closely pursued by a hungry and patriotic mob, will be in order once more.

Of course, these 10,121 jobs were created by the people's representatives, the necessary pay rolls are kept operative by taxing us ultimate consumers, and some of the people are to fill them. Even the Republicans admit that the Democrats are entitled to every billet which has not already been preëmpted by a Civil Service order. The trouble is that more than 6,000,000 citizens voted for Woodrow Wilson. As Congressman Timothy T. Ansberry, of Ohio, states it, "Six million into ten thousand wont go."

President Taft added to the gayety, also to the tragedy, of the situation not so long ago by placing 37,000 fourth-class postmasters under civil service regulations. A mighty howl has gone up, since November 5th, from every hamlet in the land, and it will be interesting to watch Mr. Wilson quell it. Immediately upon entering office he will be importuned by Democratic Senators and Representatives, national committeemen, and state chairmen to revoke this order. And it cannot be denied that there will be some justice in the demand, though it is to be hoped that for the ultimate good of all concerned the mandate will be allowed to stand.

These fourth-class postmasterships have long been a tremendous asset of the Republican party; also, they have been powerful weapons in the hands of skilful managers of preconvention campaigns. Mr. Frank H. Hitchock, now Postmaster General, did wonders with them when, as First Assistant Postmaster General, he quietly and rapidly planned to capture the 1908 Republican Presidential nomination for Mr. George B. Cortelyou, at that time Secretary of the Treasury under Mr. Roosevelt. So powerful did he make himself as the originator and guiding spirit of the several state associations of postmasters — all classes, of course, were included — that the supporters of Mr. Taft's candidacy became greatly alarmed. The militant President took a hand, with the result that Mr. Hitchcock soon resigned his position to become the manager of the Taft candidacy for the nomination, and the boom for Cortelyou was plucked in the

budding. It may be that a feeling of compassion, born of an inability to fulfil pre-convention and pre-election pledges, caused Hitchcock, as Postmaster General, to take pity on the Democrats and to urge President Taft to remove the whole fourth class from the realm of politics — and remove temptation from the enemy's path. There are thousands of Democrats who believe, however, that the order was designed to increase the obligations of the office-holders to the Republican party, and consequently to bolster up at the eleventh hour a seemingly forlorn hope. President Harrison won the temporary approval of his party, but finally the condemnation of the country as a whole, by revoking certain civil service orders issued by President Cleveland. If President Wilson allows the order concerning the fourth-class postmasterships to stand, he will be applauded ultimately, though the cost to the Democratic Party in the immediate future may be dear. Practically all the postoffice inspectors in the country are Republican, protected by civil service regulations, and they probably will not try hard to find reasons why these petty postmasters should be removed or disciplined for playing politics. In allowing the order to stand, Mr. Wilson would be following a precedent set by President McKinley, who declined in 1897 to accede to Mark Hanna's demand that the spoils of the victors be increased by restoring to the appointive list many offices which Mr. Cleveland had filled with Democrats and which toward the close of his term he placed on the permanent classified rolls.

Senator Hanna made no bones of the fact that this refusal was a sore disappointment to him. He and his cohorts had pointed proudly to the "plum tree," but when the time came for shaking it he was forced to explain that most of the fruit was screwed to the branches.

As national chairman, Mr. Hanna had allowed much hope of postmasterships to be indulged — and then there was the possibility of landing the even more attractive Cabinet positions, assistant secretaryships, commissionerships, etc. The faithful, away from the "pie-counter" for four years, journeyed to Washington in thousands—tens of thousands—only to find the big jobs promised and that several hundreds of offices which Mr. Cleveland had filled with Democrats were no longer available. Some had return tickets; others were able to borrow enough to pay their fares home; many remained a long while, running up bills at cheap hotels and boarding houses, which they never could meet, and a few stayed on to become public charges or to join the bread line.

As illustrative of the predicament he was constantly in, following the election of Mr. McKinley, Senator Hanna used to tell of an intimate friend of his who came to Washington firm in the belief that he would be appointed to a lucrative consul-generalship. This was soon found to be out of the question, so the friend agreed, as a great concession, to accept the Fourth Assistant Postmaster Generalship. But that had to go to some one else. Then, rather than return home without anything, he would allow himself to be appointed assistant chief clerk in one of the departments. That job, too, was eventually awarded to another. Finally, Hanna arranged to have him made postmaster "back home" at $1,000 a year — and he accepted.

In addition to the fourth-class postmasterships, the Republicans had thousands of positions in the Census Office to use as bait in the election of 1908. Most of these positions were temporary, being abolished at the conclusion of the taking of the census of 1910, but they were sufficiently attractive while they lasted to lure the greedy into line and to use as a balm for wounded ambitions. It is generally conceded in Washington that Mr. Frank H. Hitchcock could contribute an interesting chapter to the political annals of this country by telling how many of the pledges which he is supposed to have deemed it necessary to make as chairman of the Republican National Committee he has been able to fulfil as Postmaster General.

To this day, that Democrat with whom the desire for holding Federal office is congenital does not understand why there are not as many jobs to pass around as there were when Mr. Cleveland became

President in 1884, or even when the Democratic party returned to power in 1892. He knows only that he hungers for a title and a monthly check from the Government. The entire civil service roll may be suspended if the President so decree! So, why should he not decree? The Democratic job-hunter regards the explanation, "For the good of the service," as Republican doctrine — or excuse; when the Democrats are coming into power he brands the observance of civil service regulations as a "Grover Cleveland heresy." And there you are.

Many professional politicians in the Democratic ranks, who do not know Woodrow Wilson and who have not harkened to the progressive spirit which has made possible the elevation of such a man to the Presidency, really cherish the belief that he will divide the spoils among "the boys in the trenches" with as much relish as did a Republican of Reconstruction days, and that he will replace enemies with friends as surely as Andrew Jackson did more than eighty years ago.

On January 1st, I was informed that Chairman McCombs alone had received about 5,000 applications. These, of course, were all forwarded to Princeton.

One applicant said he had been a Democrat all his life and that, though he had only one eye, he was a better party man than most Democrats with two eyes. He wanted to be appointed a postmaster, offering to put his five children on the job with him and thereby to make up for his missing eye.

A man with one leg asked to be made a Forest Reserve inspector. He sought to show that he was better equipped for the job than a two-legged man, setting forth that there were five mountains in his district and that his wooden leg would assist him materially in climbing them.

A woman about to sail for Italy, where she was to spend the winter, took twelve pages to tell why she should be appointed to a confidential position at the White House. Her principal reason was that she had her mother and sister to support. She served notice that she would be in Washington on March 3rd and would expect to begin her duties on March 4th.

There can be no doubt that in selecting the men who are to help make his Administration a success Mr. Wilson will look to the Democratic party to furnish them. Mr. Wilson is a Democrat of the same cloth as Jefferson — and he harbors no hallucination that a President can best triumph by manning his guns with recruits from the enemy's ranks.

But in looking first to the Democrats he will be prompted by much the same high motive that George Washington was when he wrote:

"My friend, I receive with cordial welcome. He is welcome to my house and welcome to my heart; but, with all his good qualities, he is not a man of business. His opponent, with all his politics so hostile to me, is a man of business. My private feelings have nothing to do in the case. I am not George Washington, but President of the United States. As George Washington, I would do this man any kindness in my power; as President of the United States, I can do nothing."

Now for information about patronage and salary rolls. On December 21, 1910, the United States Senate called on President Taft for the following data:

1. The total number of appointments which are made by the President by nomination to and confirmation by the Senate.

2. The total number of appointments which are made by the President, but which do not require nomination to and confirmation by the Senate.

3. The total number of officers and employees of the Government subject to civil service regulations, specifying classification and number of postmasters.

4. The total number of officers and employees subject to removal by the President without action by Congress.

5. The total number of officers and employees of the United States Government exclusive of enlisted men and officers of the Army and Navy.

The reply, sent to the Senate on February 24, 1911, stated that of the first there were 9,846; of the second 993; of the third, 262,608; of the fourth 376,804; of the fifth, 411,322. These figures hold good, substantially, to-day. The slight increase in the number of appointive offices

is due principally to the transferring of fourth-class postoffices, owing to increased receipts, to the third class. The total of 411,322 "employees of the Government, exclusive of enlisted men and officers of the Army and Navy", includes thousands of court employees, day laborers, piece-workers, etc., some of whom are on the rolls only a small part of every year. About the only employees not subject to civil service regulations that could be placed on the permanent classified rolls were about 25,000 mechanics, machinists, etc., in the Navy Yards. The Civil Service Commission had been at work on their case for several months and President Taft issued the necessary order of transfer on the 12th of last December. These workmen were employed by the commandant of the yard or by certain of his subordinate officers, and they strongly objected to any change in the arrangement as it had existed.

The appointments that are made by the President "by and with the advice and consent of the Senate" were apportioned as follows in the President's report of February 24, 1911: State Department, 441; Treasury Department, 736; War Department (exclusive of Army), 6; Department of Justice, 383; Post Office Department, 7,953; Navy Department (exclusive of Naval officers), 11; Interior Department, 272; Department of Agriculture, 3; Department of Commerce and Labor (exclusive of Census), 28; Civil Service Commission, 4; Government Printing Office 1; Interstate Commerce Commission, 7; Library of Congress, 1; making a total of 9,846.

The appointments that are made by the President "without confirmation by the Senate" were apportioned as follows: State Department, 94; Department of Justice (approximately), 846; Interior Department, 44; Department of Commerce and Labor, 8; Civil Service Commission, 1; making a total of 993.

The salaries of appointive positions are almost uniformly better than those of offices on the permanent classified rolls; but better pay means a demand for increased capability, though a written examination is not required.

For many years the most lucrative positions at the disposal of the President were in the Consular Service. The salary and fees of the consul-generalship at London, for instance, amounted annually to more than $60,000. It was the reward of such valiant henchmen of the victors as Gen. Patrick Collins, of Boston, under Cleveland, and Gen. John C. New, of Indianapolis, under Harrison.

The fees at all these important posts have been entirely abolished, practically the entire Consular Service was placed on the special classified rolls of the State Department in June, 1905, by President Roosevelt, and so the spoils hunters will have to cast their covetous eyes in other directions — unless they be distinguished enough as men of affairs to warrant President Wilson in appointing them consuls-general.

In reality, every office, high or low, in the Consular Service is a Presidential appointment, and every appointee has to be confirmed by the Senate, but President Taft has established the precedent of selecting all consuls from the successful competitors in civil service examinations. As evidence of the fairness of the examinations — two of which are held every year— for these appointments, a minority of those who were examined at Washington last September had Democratic endorsements, but this minority furnished 60 per cent. of the successful candidates. President Taft has appointed only consuls-general direct from private life. Whether President Wilson will follow his lead will be watched with interest.

Some of the more important consul-generalships and the salaries thereof are as follows: Buenos Ayres, $4,500; Antwerp, $5,500; Brussels, $5,500; Rio Janeiro, $8,000; Canton (China), $5,500; Shanghai, $8,000; Tientsin, $5,500; Havana, $8,000; Marseilles, $5,500; Paris, $12,000; Frankfort, $5,500; Hamburg, $8,000; Calcutta, $6,000; Capetown, $6,000; Hong Kong, $8,000; Liverpool (consul), $8,000; London, $12,000; Manchester, $6,000; Montreal, $6,000; Ottawa, $6,000; Sydney, N. S. W., $5,500; Yokohama, $6,000; Seoul, $5,500; City of Mexico, $6,000; Rotterdam, $5,500; Panama, $5,000; Mos-

cow, $5,500; Barcelona, $5,500; and Constantinople, $6,000.

On paper the largest "plums" in the gift of the President are the ten ambassadorships — to Great Britain, France, Germany, Russia, Austria, Italy, Turkey, Brazil, Mexico, and Japan. The salary of each is $17,500, but the pomp and circumstance which has to be maintained by the holders of these positions makes them, from a financial viewpoint, the least desirable of all. The same is true of ministers, most of whom are paid $10,000 a year, and of secretaries of embassies and legations, whose compensation is small and whose social duties are many. As in the Consular Service, all lesser diplomatic posts are now under a special service regulation, so the lean and hungry must not look here for relief.

Of all the positions to be filled by the President, only about 900 are at Washington; the rest are scattered over all the land. These latter are the ones for which competition will be keenest. It is reasonably certain that practically all will be allotted, under certain reservations, to Senators and Representatives in Congress. That is, President Wilson will look to Senators and Representatives to recommend to him the proper persons in their respective states and districts for appointment to United States marshalships, collectorships of internal revenue, collectors and surveyors of ports, postmasters of the first, second, and third classes, etc. He will be under no obligation to appoint any man unless he deem him worthy, but it is not to be expected that he will undertake to make his selections solely upon his own estimates. In other words, he will doubtless observe the rules of the game as laid down by his predecessors — trust to the judgment of legislators just so long as they prove themselves trustworthy.

So, what those aspirants for Federal offices who have not already departed for Washington should really do, upon reading this, is to take counsel of their Senators and Representatives. They should not merely ask for letters of endorsement "for some position," but should find out whether they are going to be backed by those more or less distinguished gentlemen for definite posts. If they are, it would be worth their while to get endorsements from other persons of prominence and to go to Washington when they are officially notified that the respective jobs are under consideration. Then go to the White House when they are sent for. On the other hand, if they find that they are not to have the proper backing, and that there are no unusual circumstances which would cause President Wilson or his Cabinet ministers to take them into account, they would do well to banish hope of political preferment and to go their way as they were going before the Democratic victory.

The most lucrative positions at Washington are the nine Cabinet portfolios, which pay $12,000 a year apiece. These are also the most expensive to maintain. Then come the Solicitor General of the Department of Justice, $10,000; the Treasurer of the United States, $8,000; the Assistant Attorney General for the Customs Division, $8,000; Deputy Assistant Attorney General (Customs Division), $7,500; Director of the Reclamation Service, $7,500; Secretary to the President, $7,500; — the salary of this post is to be $6,000 after March 4th, unless special provision is otherwise made in one of the appropriation bills now before Congress; Counselor of the State Department, $7,500; Resident Diplomatic Officer of the State Department, $7,500; Director of the Census, $7,000; Commissioner of Internal Revenue, $6,000; Chief Engineer of the Reclamation Service, $6,500; Director of the Bureau of Engraving and Printing, $6,000; Comptroller of the Currency, $6,000; Comptroller of the Treasury, $6,000; Director of the Geological Survey, $6,000; Director of the Bureau of Mines, $6,000; Superintendent of the Capitol Building and Grounds, $6,000; Superintendent of the Coast and Geodetic Survey, $6,000; Commissioner of the Bureau of Fisheries, $6,000; and Director of the Bureau of Standards, $6,000. The salaries of the Assistant Secretaries of State, Treasury, War, Navy, Interior, Agriculture, Commerce and Labor, Assistant Attorneys-General, and Assistant Postmasters-General are each $5,000. Then there is the Commissioner of the Bureau

of Corporations, the Commissioner of Labor, the Commissioner of Immigration, and a number of other equally important commissionerships carrying salaries of $5,000. With but few exceptions the appointive positions that are to be filled by the President have no salaries lower than $3,500 a year.

It is well to warn again the weary and ambitious that these Washington jobs, as a rule, are not allotted to Senators and Congressmen, but that they are filled by the President with men of whose fitness he has personal knowledge or upon the recommendation of the particular Cabinet officers that have jurisdiction over them. And how they are sought after! Men and women journey to the National Capital from the four corners of the land, often leaving behind them comfortable homes and living wages to enter upon a life of practical oblivion, with relatively small pay. Those who pass civil service examinations have to wait their turn and, once appointed, they spend much of their spare time in urging Senators and Representatives to see that they are promoted. It is pardonable that in some cases such influence has effect. In due time these office holders, realizing that the high positions are not for them, become dissatisfied, and pass the rest of their days eking out a mere existence, whereas, if they had remained at home or had gone elsewhere, they might have made their mark in the world. Praise for the man who starts at the bottom and expects to work his way up is all very well, but in accepting an humble government position all too often the man discloses his true measure.

Much has been written about the development of the city of Washington through the extension of the permanent classified rolls, but the manner in which many of these people have to live would be described by Balzac as "industrious poverty." I am speaking, of course, of the ordinary department clerks, messengers, etc., and have not in mind persons who are engaged in scientific or other expert work. Walt Whitman was once a department clerk, but the success he achieved in literature was not accomplished through any service rendered to the Government. Paul Laurence Dunbar, the gifted Negro poet, was a department clerk but he resigned because he did not consider himself capable of performing his duties!

President Wilson already has a pretty good idea from his correspondence of what is in store for him after March 4th. Upon his return from Bermuda he announced that he had received during his month's vacation 7,000 letters, more than half of which were applications for jobs. His secretaries at Princeton and Trenton have received an even greater number.

As was to be expected, these applications are of all lengths and degrees of hopefulness. All writers dwell upon their records as Democrats; nearly all give assurances that they were original Wilson men; many tell their pedigrees in detail; some describe how hard up they are; and practically all are willing to take something else if they fail to secure the position asked for.

A member of Congress from Ohio, commenting to the writer recently on the prevalent desire to hold public office, told of a man in his state, reputed to be worth one hundred thousand dollars, who sold out his business a few years ago and went to Columbus, O., bent upon securing an important position under Governor Harmon. One disappointment after another befell him, but finally he was offered a place as guard in the Ohio Penitentiary at $60 a month. He accepted it.

It would be well for the hungry multitude to know that it is reasonably certain that President Wilson will make few if any appointments in the country at large until Congress has enacted the tariff bills and certain other urgent Democratic measures into law. This will postpone the day of realization until August 1st at least. Then it would be well to ponder the fate of three ambitious young men who came to Washington from the West twenty years ago, and were forced to accept small clerkships in the Interior Department, though they had every reason to believe, upon leaving home, that they would get something of scarcely less importance than a Cabinet portfolio. During the four years of the Cleveland Administration they spent all they earned. Their positions were not transferred to the classified rolls, and

when McKinley appointed Republicans to succeed them they ended it all by jumping into the Potomac. Then there is the case of the person of imposing appearance who came to Washington two years ago fully expecting to be elected Clerk of the House of Representatives. He wound up with a job on an elevator in the House of Representatives Office Building and he is still running his "lift."

WHAT I AM TRYING TO DO

BY

FRANKLIN K. LANE

(OF THE INTERSTATE COMMERCE COMMISSION)

WHAT are we of the Interstate Commerce Commission trying to do? We are seven, but we work as one. It would be hard to find seven men who differ more in temperament, in training, or in type of mind than Mr. Clements, of Georgia, Mr. Prouty, of Vermont, Mr. Clark, of Iowa, Mr. Harlan, of Illinois, Mr. McChord, of Kentucky, Mr. Meyer, of Wisconsin, and the writer. We differ as one leaf from another in our political sympathies. Often we do not arrive at our conclusions from the same strategic angle. Yet I believe that no other group of men labors for the Government with more singleness of purpose than does this Commission, and, whatever divergences of opinion may arise as to the right construction of the law or the true bearing of a body of facts, every member of the Commission works with the conscious pride that the judgment of his colleagues is an honest judgment, one born of conviction and undirected by any sinister influence. Furthermore, this confidence and this spirit work down through examiner, accountant, agent, and clerk, so that our force is one that gives itself with fine enthusiasm to the public service, in an earnest effort to solve one of the most intricate and intimate problems of our time.

There is, of course, a flat-footed way of stating our purpose — one transcribed from the letter of the statute: We are attempting to regulate and control the rates, rules, and practices of our railroads, and of other public utilities engaged in interstate commerce. (Herein, however, I shall deal only with railroads.) I recognize that such a statement is about as luminous as to say that the President of the United States is trying to enforce obedience to the Nation's laws and give direction to its policies. Succinctly and suggestively put, it may be said that the object of each day's work — the investigations made, the rulings and orders issued — is to insure fair play as between the public who need transportation service and the carriers who furnish it.

Congress has undertaken to make private capital serve public ends. This Commission is the arm which the Nation has created to enforce this policy. The Act to Regulate Commerce is a series of statutes born of the experience of the people, which as an entirety constitute the economic constitution under which this Commission acts. In a very real, though not perhaps a strictly legal, sense we legislate within fixed limitations. The effectiveness of our work has been made possible only by the liberality of the Supreme Court in the construction of this law and of the powers of the Commission.

It is entirely within the truth to say that this Commission has no policy other than that which is expressed from day to day in the rulings that it makes. At the same time it would be idle to say that we are without consciousness of direction. Indeed, it would be worse than foolish to place the administration of a law of such momentous significance in the hands of those who would idly drift upon a sea of fitful caprice.

Our primary object must be to prove the efficacy of the machinery devised by

law for bringing the policy of our railroads into conformity with the policy of the law — to make private capital serve public need and yet conserve the interest of the railroad owner. The public wish the best of service at the lowest possible rates; the owners desire the highest return consonant with the fulfilment of their undertaken duties. This may be an *impassé* — a situation so impossible of resolution that we are destined to join those nations who are experimenting with governmental ownership and operation. That stage of despair, or of resolution — dependent upon the viewpoint — we, however, have not yet reached. In fact, I believe we are far from it, for we have only entered upon the experiment of regulation by commission, and students of this subject from other lands have said that their countries would not have sought refuge in governmental ownership had they in time discovered the American method of dealing with the railroad problem. However that may be, we have a theory of law under which these great enterprises may be made subject to plenary governmental control, and have devised machinery by which this theory may be carried into effect. Our purpose, therefore, is to prove if possible that this theory can be made to work — at least to test fully its possibilities.

Within the zone of our power it is our endeavor to make the railroads of the country supremely serviceable to the people; to protect the shippers from extortionate rates; to insure to every shipper under like circumstances the same rate; to guard against the wilful preference of one commodity over another or of one community over another; to make every railroad a part of a great national system, bringing its dependent people into as intimate touch as possible with the commerce and life of the whole land; to bring the railroad man to feel that he has the protection of the law in repelling the advances and intrigues of those shippers who seek to break down rates and secure unfair advantages; and to maintain, so far as may be, peace between our competing communities.

In this experiment we are trying above all to be practical; to work with facts; to make progress that will be real; to avoid the pitfalls that befall the doctrinaire; to deal with the problem of the day as an isolated case and yet endeavor that it shall be so dealt with as to bring it into harmony with a far-sighted plan that will make for continuity of railroad policy and for the authority of sound sense and public spirit in the conduct of railroad affairs. If wise we are not to be terrorized by our own precedents or those of the railroads themselves; less than a century of experience is too short a time within which to say the final word upon any problem of railway economics. And constantly there is this all-important factor to be safeguarded: the self-respecting, self-asserting, risk-taking, personal initiative of the railroad man whose imagination and experience must be sympathetically brought into public service if the whole scheme of regulation is to become more than a flat code of lifeless rules.

It is not to be wondered at that railroad men have seemed to adapt themselves somewhat ungraciously to the new order of things, for they have grasped with difficulty the fundamental fact that our railroads have passed out of the status of private industries into the status of public utilities. It was because they accepted the former theory that so many of the evils arose which caused the institution of the Act which we are endeavoring to enforce. In earlier days railroad men accepted uniformly the current law of competition as a full code for the government of their conduct. It was their business as practical men to make their properties as profitable as possible. They did not understand the philosophy which distinguished their properties from other business enterprises. Regarded from this standpoint, their practices became entirely reasonable, for if the law of competition is to have full sway as between rival railroads the rebate becomes a legitimate and sometimes a necessary weapon. Competition may compel a reduction in price but not a like reduction to everyone. The object of the railroad was to secure traffic. A rebate was a percentage of discount from catalogue rates. Not only

did the railroad man justify to himself the making of a difference in the rate as between individuals, but when he found it to his interest to give preference to one community over another this, too, seemed to him entirely natural. The one and only test which he applied was, "Do conditions make it necessary for me to grant this concession in order to secure this business?" That question being answered in the affirmative, we see how it came about that the larger shipper, the powerful interest, or the more enterprising community secured a preference which enabled it to grow, while the smaller shipper, the minor or non-preferred community, was threatened with extinction.

To be sure, railroad policies differed. This was because railroad men differed. Some had larger imaginations than others and comprehended more perfectly the import of their conduct. But railroading was to all an industry. Its product was tons of freight hauled or passenger miles made. To cut a rate to secure traffic was thought to be no more offensive to good morals or fair dealing than for one contractor to underbid another in the selling price of a house.

In superimposing restraint upon these carriers — a restraint which the law had always recognized as possible — and in attempting to enforce the regulations now imposed, it is not to be overlooked that our railroads were built in large part upon this private industry theory. As a nation we took no more concern as to where a railroad was to be built or how it was built than we did as to where a man should live or how he lived. It was any one's privilege to build a railroad. Given a financier of underwriting reputation, a road could be projected from Dan to Beersheba without any one knowing the location or the traffic-producing possibilities of either place. The result was as pretty a system of unscientifically planned railroads as might well be imagined, and not only unscientifically planned but illy and uneconomically built. Originally they were erected to serve local needs. Many of them were later connected into nation-serving carriers by the strength and synthetic genius of a few men. But as a whole they were without large plan, built upon a speculative and competitive basis, and operated as rival industries. Logically, therefore, and perhaps inevitably, they fought their way to the edge of bankruptcy, or beyond. Then, to save themselves, they took refuge in combinations, pools, and agreements under which they raised rates and reduced service. To enforce these agreements they formed commissions among themselves and tried to punish one another for breach of these agreements. These plans, however, proved ineffective. Railroad officials refused to allow their fellows to hamper them in their legitimate effort to secure traffic. In fact, such pools and combinations were sometimes made as a mere front — a Pharisaical concession to railroad opinion following a serious rate war, after the fashion of old-school diplomats who made treaties with the implied understanding on all sides that they were to be broken when expedient. Indeed, when the shipping world discovered that under such agreements rates had been multiplied by two or three and the industries and traffic of whole sections of the country were thrown into confusion, public-spirited railroad men would find it a virtue to violate such agreements in the interest of their dependent enterprises and communities. Thus resulted more rebates, discriminations, and rate-cuttings, until through the years the whole fabric of rates became more noticeable for its ragged breaches than for its stable structure. No shipper could tell what rate his neighbor paid; a premium was put upon dishonesty; the life of an industrial enterprise became a mere matter of gambling in freight rates; and the Nation found itself subject to the perilous control of public service corporations that were engaged in the destruction of one another to the embarrassment and disturbance of our industrial life.

Such a policy the people dared no longer hazard — for the misfortunes of a railroad are the misfortunes of the public and the policy of a railroad is a national, not a private, concern. The Government sought a remedy, and by slow process felt its way to the present system of limited regulation by which stability of rates is reason-

ably ensured and under which revenues have risen to a plane which makes return upon investment more certain than ever before. Whatever of competition there is must now be open and deliberate — not the result of secret agreement nor of unpremeditated impulse. And thus the Government is undertaking to protect the railroads in no small measure from themselves, from one another, and from the shippers.

It would be difficult, I think, to find a self-respecting railroad man who would presume to say to the American people that he would prefer to return to the order of things that prevailed before the Government undertook the regulation of the railroads. The mere stock speculator may think himself aggrieved because he may not now make those figures that will boom or depress his stock at propitious times. The wrecker who makes money by destroying properties may have his sphere of influence limited. The monopolist who thinks to compel industry to feed his too eager appetite for sudden wealth, as well as the rebate giver whose sole idea is to buy business, may rebel. But these are not the self-respecting railroad men of the present; they are the outlaws of modern railroading. There was a day when they flourished. Some still live, unhappily uttering from day to day their lugubrious prophecies of a direful future and bewailing the day that is done. They are past, however, these men who turned a high card in a gambler's game and capitalized a future which the "widows and orphans" could not foresee. We can trace their footsteps across the continent in the history of building contracts replete with graft, of ruinous rate wars, receiverships, reorganizations, pools that would not stay pooled, trusts created by midnight rate agreements, broken promises made to neglected cities, shrunken or moribund industries that went unfavored, and unhappy bits of unkempt railroad left to struggle with an abnormal debt which now and then set up a pitiful cry for help. But the railroad investor whose honest dollar this Government is endeavoring to protect, and the honest shipper who wishes no more than that his dollar shall buy him one dollar's worth of railroad service, and the honest railroad man who takes pride in the efficiency of the great plant he operates — all three alike — congratulate themselves that the conditions of railroading in the United States to-day are not such as obtained when, in Bret Harte's happy phrase, "things ran loose."

It is said that railroad regulation restricts railroad building. No doubt this is true in part. This Commission has no power to permit a railroad to be built or to deny it that right. Nevertheless, the powers that we do exercise doubtless have an influence in limiting the building of certain types of roads, notably those whose primary purpose is not public service but a species of blackmail upon other roads or those whose rails are laid as a foundation for wildcat speculation. Let us be frank, however, and inquire why, the country over, we are not building railroads with that same feverish activity that characterized the '70's and '80's. Manifestly one reason is that there is not the opportunity. The railroad map of the United States in 1861 showed about 35,000 miles of railroad; that of 1910 nearly 250,000 miles. The greater part of this development took place in the two decades following the Civil War. There are now few large spaces on that map which remain unsupplied with the major transportation facilities. Nor have the people so much to give by way of bounty as they had in earlier days when they donated to the railroads of the country a tract of land amounting in the aggregate to seven times the superficial area of the state of Pennsylvania. Naturally this condition could not continue indefinitely. There followed a period of reaction in which many lost all that they had ventured in these properties, and now, out of this welter of building, organizing, and reorganizing, we have come upon a period of greater stability in which we are making fuller use of the utilities we have, placing them upon a sounder basis and in fitter condition.

There is to my mind another, perhaps a minor, reason for the comparative decrease in railroad building during later years. The promoter has been engaged in other business. The industrial corpora-

tion has been the great speculation of the last few years. Our financiers had fairly well saturated the market with railroad securities, but industrial corporations had never felt the buoyant effect of an aggressive policy of exploitation for speculative or investment purposes. Here was a virgin field with no unfortunate history and of the fairest promise. It appealed as seductively to the optimistic American as railroads ever had. The industry of selling securities is applied psychology. It depends upon impression and suggestion. The hypnotist does not throw two ideas into the mind of the same subject at the same time. And so for some years we have found the energy of the interested press and of the "street" put into suggesting this most profitable single thought: "Industrials are the things now." With the result that in ten years we have uttered and sold more industrial securities than had been sold upon all the bourses of the world — perhaps more than were ever issued before. But while we know that the wise promoter plays upon a harp of a single string we also know that he sometimes changes that string. So it may come to pass that upon the slightest provocation or excuse his present sad song as to railroad securities may yet turn into a gladsome outburst whenever this shall become advisable.

It is probably true that as a speculative industry railroading in the United States will not flourish in the future as it has in the past. As a basis for sound investment, however, the hope of the American railroad rests in successful regulation. There has never been a period of greater prosperity for our railroads than that which they have enjoyed under their present subjection to governmental control. We have seen what their history was when they conducted themselves pretty much as they chose — without restriction, unhampered by the harassing hand of the Government. Now, let us consider the net result. We will take two years by way of contrast, 1890 and 1911. In 1890 we were enjoying good times. Certainly that was not a period of depression. In that year, without regulation, the net operating income per mile of single-track railroad in the United States was $664. This amount was left to the stockholder after deducting all operating expenses, taxes, and interest upon bonds. Coming forward now twenty-one years to 1911, we find that under regulation the net operating income per mile had increased to $2,088. To be sure, this mile is not precisely the same mile. The mile of 1911 represents greater value, some of which has been the result of added capital; the greater portion, however, has been the result of improvements made out of earnings. The first figure represents fifty years of freedom to sell transportation to whomever wished to buy at any rates that would secure traffic. The second figure is the result of a few years of comparatively inconspicuous regulation under the utility theory. Surely it cannot be justly said that regulation has destroyed railroad credit in the silencing presence of this fact.

And because of the very protection now granted under the law there are some who would urge, with reckless disregard of their own history and experience, an increasing rate of toll with every new rise in value. These unwise and too precipitate gentlemen ask that the Government shall by force of law do for them what they could not have done for themselves under the private industry theory, and do it possibly to the demoralization of industry. Wisdom would seem to teach that the transition from the one theory to the other must, for the very welfare of the roads themselves, carry with it no conditions that are onerous and not plainly justifiable before the court of public opinion.

As we have seen, the past of the American railroad has been disturbed, unstable, perilous. Its present is more steady and makes promise of a surer future. What that future shall be is one of those great problems which must necessarily engage the minds of those who think at all upon this most perplexing and many-sided question, and it is one that turns to no slight extent upon the policy which the Government adopts toward the railroads, and upon the policy which they adopt toward the Government. This country can not grow without adequate transportation facilities. The railroad is our common highroad; it is not a luxury; it is not a con-

cern in which the farmer and the manufacturer alone are interested; it is an essential to the commercial life of our people, almost as necessary as the land itself. For we have grown up as a people to be physically dependent upon our railroads. No other people are so bound up as are we in economic interdependence. No one community in all this land lives to itself. We have grown as railroads were built. We have made a community of a continent. The freight rate determines where we shall mine and how we shall mine; where we shall manufacture and how we shall manufacture; where we shall plant and what we shall plant; what we shall eat and wherewithal we shall be clothed. With a national system of railways that penetrates into the remotest sections of the country, a service that is dependable and adapted to our industrial life, and rates so low as to make the least possible tax upon trade, the United States as a commercial and industrial entity will realize itself fully. If, on the other hand, we have too few railroads, giving meagre service and following the false policy of exacting high tolls, the Nation's growth will be by so much retarded.

The people of the United States are not niggardly nor unjust, neither are they unconscious of the value to them of these great facilities. They know that they must secure the investment of private capital in the extension and improvement of these highways or that public capital must be furnished in its stead. They are willing, desirous in fact, that this investment shall secure a reasonable return. But what should that return be? Should rates be made merely to meet the needs of the day and every new investment come from a new increment of capital, or should the shipper of to-day be taxed in some part for the benefit of the shipper of to-morrow? To whom belongs the broad margin of profit arising out of superior efficiency, and what should be the standard from which to measure up or down? What share should the community itself have in the growth of values which it in part creates? Questions like these are hidden in the often ingenuous inquiry, "What is a reasonable rate?" And their answer cannot be found in the books but must come from a prescient study of the whole railroad problem.

To make regulation a success we must have coöperation — a sympathetic understanding of the direction that must be taken by the shipper, the Government, and the railroad man. So long as the private industry theory obtained, railroad men might well have said that the public was not concerned with the internal affairs of a railroad. It was a matter for the stockholders to inquire into if railroad officers used railroad money to promote coal mines, cement plants, or steel or car works of their own. It was a stockholders' matter if directors speculated with railroad money in a railroad's stocks, if favored construction companies made fantastic profits, if exorbitant prices were paid to get rid of troublesome minorities, or if unreasonable divisions were given out of joint rates to increase the income of connecting lines. But these were phases of a day of other ideals and standards. With the new theory we may hope to see an increasing number of railroad directors who represent the money of the real investor and who give their time to its protection, and of railroad presidents who live at least part of their time upon the line of their own railroads and know the needs of the country they serve and are in touch with its people. In all charitableness it can be said that there has been too close an identity between railroad policies and Wall Street policies. Wall Street has its true place and proper function in the body politic, but Thackeray warns us that it is not well to centre one's vision upon any one part of the body lest we become like those medieval monks who grew deformed, short-sighted, and downcast from constant gazing at the pit of their stomachs which they mystically conceived to be the centre of the universe. The men who actually operate our railroads, who keep the intricate wheels of this mighty machine constantly in motion and always at our service, receive too little public acknowledgment for the work they perform. They are among the most skilled, capable, and honest of our business and professional men. They have an enthusiasm

in their work and a loyalty to their companies that is a constant satisfaction, and their delinquencies too often may be traced to policies which purely as railroad men they would not countenance. With these men we can work, and through them we may hope for the realization of a national system of railroads that will be fair as to rates, profitable as to income, and adequate as to service.

THE BOY WHO WAS BORN IN OUR TOWN

BY

SAMUEL McCOY

A GLORIOUS morning of the first week of October in Indiana: the whole flat landscape bathed in the gold of the morning, the air pure and cool and sweet as "kissin', jest new-invented." Along the main road that leads to the west out of a little town in the central part of the state is grouped a company of people that stirs the curiosity of every stranger that enters the town. The highroad, from the western limits of the town clear to the stone courthouse in the heart of the town, is lined with American flags. In some of the little dooryards that come down to the edge of the street are dozens of tiny flags, implanted in the lawn, a quaint flowering of the turf. Over more than a few of the frame cottages is draped a great banner — Old Glory — its splendid colors falling from eaves to doorstep. Every cottage, every veranda, every dooryard, is full of folks who stand looking toward the west as though expecting the arrival of some one. The road is lined on each side with hundreds of expectant faces. And everywhere are children — big boys, little boys, big girls, little girls, girls in pigtails and girls with their hair "done up," boys in their fathers' long pants made over, and boys in jumpers, so small that they cling desperately to their sisters' hands — hundreds and hundreds of children, a veritable Hamelyn town of them. And like their elders they all look steadfastly up the road toward the west.

Eleven strikes on the town clock, far off, back in the heart of the town.

It seems as if a fellow just *couldn't* wait any longer!

And then, far down the level highway to the west, leading from Indianapolis, there comes into sight a great touring car. Some one among the children cries out "There he is!" A murmur runs through the lines of people, suppressed excitement that is on the verge of being loosed.

> What little town by river or sea-shore,
> Or mountain-built with peaceful citadel,
> Is emptied of this folk, this pious morn?

This is Greenfield, stranger. You'll do no business here to-day, for the whole enduring town, from the Mayor down to the little yellow dog that belongs to nobody, has knocked off work and gone out to meet — *whom?*

The big touring car comes nearer. There are a half-dozen men in it, but the crowd sees only one — a natty little man with big ears, an Alpine hat, and the kindest, sweetest, most elfin, most winning smile in the world, who leans forward from where he is huddled in the leather cushions to smile and to wave his left hand to every one. And how the people cheer as the car rolls slowly through the waiting lines! How the flags are waved! And how the children throw upon the lap of the little man with the smile, "half-way 'twixt tear and laugh," nosegay after nosegay of old-fashioned flowers from old-fashioned gardens, until the whole car is filled with them! What a wonderful greeting it is! And the little man — he

must be some great man; a Congressman, or a Senator, maybe?

Shucks, no, stranger — that's only Jim!

The car stops so that the Mayor of Greenfield and old white-headed George Carr, who was Mayor once before, can climb into it and sit beside Jim; then goes on slowly, so slowly that the Greenfield brass band can march before it as it goes on into the city, and the children can troop along beside it, with more flowers.

The Town Square is reached. There are flags draped all over the City Hall, and on every business block. The Square is so crowded with folks that the car can scarcely make its way to the curb. And there are people leaning out of every window above the heads of the crowd — in Martin's store, and Thayer's Spot Cash Drygoods Emporium, and Curry's Spot Cash Hardware Store, and all the rest. There are a dozen young men crowded around the blonde stenographer who is leaning so dangerously from the window of Tindall's law office; but they are not looking at *her*, nor does she notice *them* — they are all looking at Jim. Mercy *on* us, where have all the folks come from? There aren't so many in all Greenfield, at least there haven't been since the Regiment went off to the War. There are dusty buggies hitched all around the Square — folks must have come in from the whole county! And the *children!* Has the boy-house fell down?

The car is the centre of thousands of people now, all struggling, with smiles, to reach Jim's side and shake his hand — his left hand. Didn't you know? He can't use his right hand any more. Even when Benj. Parker died, last year, Jim had to write by guiding his right hand with his left. But his cheeks are ruddy as apples and his smile is a light even in the sunshine. Look at all the old fellows coming up to the car! There's old Judge J. Ward Walker—a little frail now, in spite of his stiff white goatee, in his rusty beaver tile and his rustier overcoat. "Hello, Jim!" he says as gruffly as he can. Their hand-clasp is very sweet. "*You're* looking well," Jim says. "Well, not so pert now, Jim — there's a sort of a cold settling on my lungs and I can't seem to get shet of it. Doctor told me I hadn't ought to come out to-day. But ——"

Jim is very close to needing his handkerchief, for some reason.

Here's some more old fellows — not all prosperous, like Judge Walker. One of them looks as though his unkempt white beard had been too often in the saloon. Things haven't gone right with him, you can tell. He reaches out his hand a little timidly and there is a wistful look, like that of a lost dog, in his eyes, as he says, "You know *me*, don't you, Jim?" Jim turns to him and his face lights up. "Why, of *course!*" he says. "How *are* you?" "Fine," lies the derelict bravely; and as he turns away you see that the look of loneliness in his bleared eyes has given way to one of pride.

And the old ladies! Aren't there a lot of *them*, too! Some of them are awful frail-looking, too, with bent backs and wrinkled faces, pale as ivory, but most of them are so jolly and motherly that a boy just can't help thinking about Thanksgiving — you know why. And some of them are in store clothes, but lots of them are in calico prints with sun-bonnets. And *they* are all elbowing up to see Jim. And Jim calls them all by their first names — acts as if he'd known them ever since they wore short dresses and braids with red ribbons in them. How they all laugh at what Jim's saying! Something about "valentine" was all *I* heard.

(*Why, the Mayor's standing up in the car now — waving his hand to quiet the crowd, as if he's going to make a speech! Pshaw, you can't fool me! This Jim is some shakes, somewhere, I'll bet a hat. Maybe he's a Senator; or a General, maybe.*

(Oh, hush up! It's only Jim, I tell you. Listen to what the Mayor's saying.)

Yes, that's the Mayor, Ory Wells, that tall young fellow with the keen face, that's standing up now. He's introducing — But hold on, there's little Marshall Watts Carr, there in the wheel-chair. There, right behind Editor Spencer, him that writes up the *Reporter*. Curvature of the spine? Well, that child don't worry none about *that!* But he would ha' been disappointed no end if he hadn't been allowed to come out with the other children

to-day. He hops around on his little crutches just as lively as a frog. There ain't many children as lucky as he is, he'll tell you. And besides, he's a particular friend of Jim's. So of *course* he had to come out to-day. Look, they're wheeling his chair so that Jim can see him! And by jing, if it ain't as heaped up with flowers as Jim's automobile is! Look, they're waving their hands at each other, those two, Jim and little Watts!

Well, the speeches have begun. Only I never heard such a funny way of making speeches, did *you?* They don't seem to rant and wave their arms around and holler, at all, the way you *ought* to do when you make a speech: they're just talking to the crowd as if they was talking to a friend in the setting-room. But everybody's listening.

The first is old Senator Hough. He stands up in an automobile and says a lot of things about Jim. Senator Hough is gray-bearded — venerable, like the picture of William Cullen Bryant in the school-book. It seems from what he says that he has known this Jim ever since Jim was knee-high to a grasshopper; and he says that he always thinks of Jim as "the boy who was born in our town." Why do the folks all cheer so when he says *that?* Plenty of other boys have been born in this town. But, somehow, that saying seems to stick in your mind — "the boy who was born in our town." What makes it sound so solemn and so sweet?

Seems as if the crowd would never get done cheering. Then John Mitchell, not young John Mitchell, but the older, the man that owns the *Hancock County Democrat*, gets up and tells how Jim urged him, when they were both young fellows, to stick to the home town, and how glad he is that he followed Jim's advice. Because, though Jim has been away from Greenfield, he has always been a part of it, and so he has practised what he preached.

And then Will Hough, the lawyer that's in politics, Senator Hough's son, gets up and makes a real speech, the way Indiana orators do. But he winds up by speaking a piece that he says Jim wrote — a piece called 'Tradin' Joe.' And the funny thing about it is, that it don't seem as if it is Will Hough standing there at all, but this old farmer Joe, as plain as if he was just one of the crowd. Curious, isn't it?

(*Why, I know now who this fellow Jim is — he's the man that sat in the seat of honor next to Sir Henry Irving and General Sherman at the banquet in New York; and, shucks, the time he went to London, all the big guns in gold what-d'ye-call-'em's invited him in to Sunday dinner; his name's* ——

(Well, what of it? *We* ain't ashamed of him, even if he *does* eat at the White House whenever he goes to Washington. Shut up and don't interrupt again.)

Look, there's Mr. Larrabee getting up! And what's that in his hand? Why, it's a silver cup! Three handles to it! Mr. Larrabee is the superintendent of all the schools in Greenfield. What's that he calls the cup? A *loving* cup? Well, I guess you couldn't find any better name for a cup that they're going to give to *Jim.* And he says that it didn't cost much, but every last one of the children in the schools in Greenfield gave a nickel or a dime to help buy it. Just because they loved Jim so. And he tells about the old teacher who used to be so fond of naughty little Jim when Jim was a little boy — "the boy who was born in our town."

Why is every one in all this great company in the village Square so quiet? And the noon-day light on their faces — they don't seem like plain, common people!

Ah, there is so much love here that it seems awfully close to Heaven!

It's lucky we're standing so close to Jim's car — else we couldn't hear what he's saying now. Seems as though he hardly dares lift up his head. And he looks as though he was standing in front of something bigger than anything he had ever dreamed of — something bigger than the whole world; something that's a part of another world. Listen! you can just hear the stumbling words:

"I'm overwhelmed. I think only that I'm favored here beyond my merits. I feel only as though I ought to apologize to you for my failures. But you know how my heart is touched. Heaven can be only a part of this."

That is how Jim Riley came home.

THE DAY'S WORK OF THE MT. WILSON OBSERVATORY

STUDYING THE HEAVENS WITH THE AID OF HIGHLY REFINED MACHINERY AND OF THE RESOURCES OF CHEMISTRY TO DISCOVER NEW FACTS ABOUT THE STARS AND ESPECIALLY ABOUT THE SUN

BY

GEORGE ELLERY HALE

DIRECTOR OF THE MT. WILSON SOLAR OBSERVATORY IN SOUTHERN CALIFORNIA

THE Mount Wilson Solar Observatory is one of two departments of astronomical research established by the Carnegie Institution. The other is the department of Meridian Astrometry which, under the direction of the late Professor Lewis Boss, has accomplished remarkable results. The meridian circle of the Dudley Observatory was sent to South America to determine the exact position of southern stars. The long series of observations, already completed, have been combined with previous observations made in Albany, and the result has been the most accurate star catalogue hitherto published.

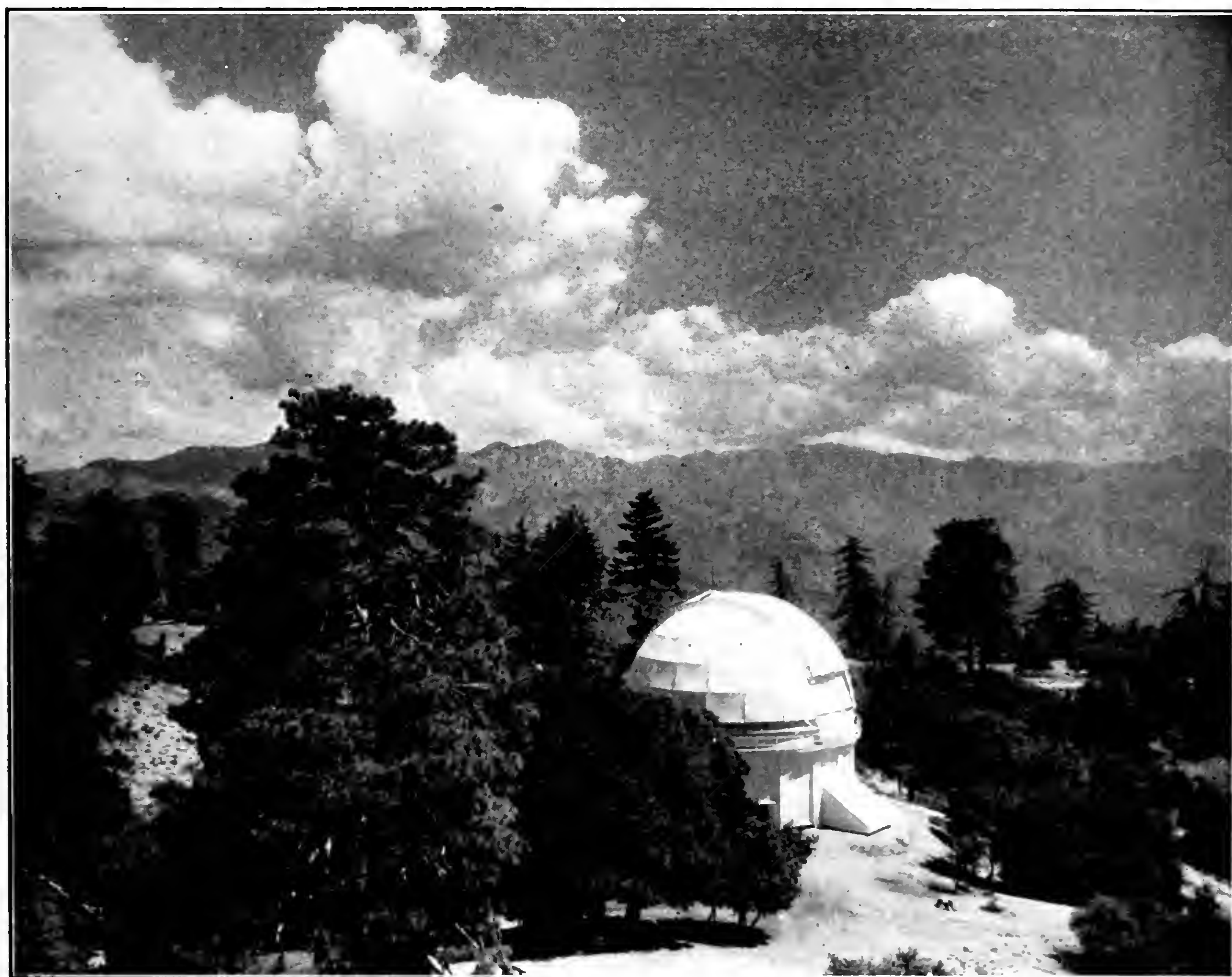
The purpose of the Mount Wilson Observatory is to learn as much as possible about the life history of stars: how they originate, the stages they pass through in their evolution, their chemical composition, their physical phenomena, and the bearing of community of motion or peculiarity of distribution on physical development. All the stars (planets are not included under this designation) but one are so remote that they can be observed even with the most powerful telescopes only as minute needle-points of light. The one star in our immediate neighborhood is the sun, and of this we are able to form a large image, all parts of which can be studied separately. For this reason special attention is given to the study of the sun, and for this three telescopes are provided.

A few examples will suffice to show how this work is done. Suppose we wish to determine the chemical composition of the sun. We form an image of the sun with the aid of a telescope and analyze the light from this image with a spectroscope. The white sunlight is spread out by the prism of the spectroscope into a long band or spectrum, crossed with more than 20,000 narrow dark lines. Every one of these lines belongs to some chemical element. To identify these lines we transform the metal into luminous vapor by passing an electric arc between two iron rods, and analyze the light of this arc with the spectroscope. By a simple arrangement the spectrum of the arc can be photographed side by side with the spectrum of the sun. It is then found that many of the dark lines of the solar spectrum correspond exactly in position with bright lines in the spectrum of the arc. In the same way the lines of other elements can be identified. It is thus an extremely simple matter to determine just what chemical elements are represented in the solar spectrum.

Having determined the chemical composition of the sun, our next step may be to find how the elements are distributed in the solar atmosphere. In the first place, the nature of the sun's light shows at once that these substances are present in a state of vapor. The temperature of the surface of the sun has been found to be about 6000° Centigrade. At this temperature all known elements are vaporized, and we may safely conclude that no solids are present within the sun's mass, especially in view of the fact that in passing from the surface to the centre the temperature must rise enormously. To determine the pressure in different parts of the sun's

atmosphere, we photograph in the laboratory the spectrum of an electric arc in an enclosed chamber, under a wide range of pressure. In this way we find that the lines of the arc are shifted toward the red end of the spectrum as the pressure is increased, and that the amount of the shift is directly proportional to the pressure of the surrounding atmosphere. By measuring the similar shift of lines in the solar spectrum, we can determine what the pressure is in the region where any given line originates. Proceeding in this way we find that the solar atmosphere is comparatively dense near the visible surface of the sun, where the pressure amounts to four or five times that of the earth's atmosphere. Higher up the pressure becomes lower, and in the upper regions of the sun's atmosphere it is exceedingly low, comparable to the pressure in a vacuum tube. In general, the heavier elements lie at the base of the solar atmosphere, while the lightest elements, such as hydrogen and helium, rise to great heights above the sun's surface.

We may also measure the motions of the gases in the sun's atmosphere, on the principle that when a luminous vapor is moving rapidly toward the observer, with a velocity comparable to that of light, the lines in its spectrum are displaced toward the violet. If the vapor is moving away from the observer, the lines are displaced toward the red. Fortunately it is easy to distinguish displacements of this nature from displacements which are produced by pressure, so that no confusion exists. In this way it is found that in some parts of the sun the vapors are rising, while in others they are falling. Thus the general circulation in the solar atmosphere can be learned.



THE EXTRAORDINARY SITE OF THE OBSERVATORY

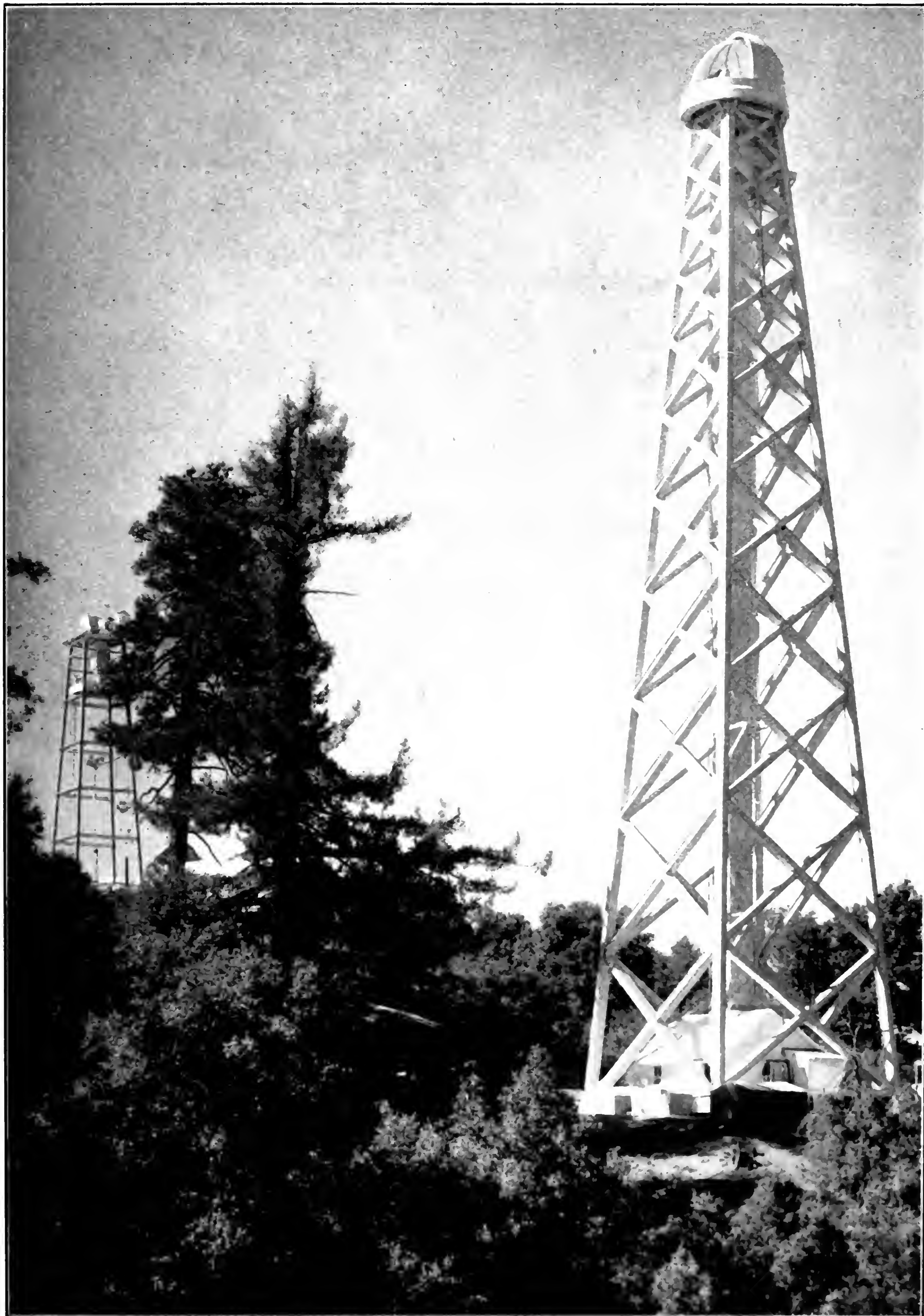
ON THE SUMMIT OF MT. WILSON, 7,000 FEET ABOVE THE SEA, ABOVE THE FOGS AND MOST CLOUDS, LOOKING ACROSS GREAT CAÑONS TO RANGES OF LESSER PEAKS AND STEEPLY DOWN UPON PASADENA, 13 MILES AWAY UPON THE PLAIN

So far we have considered the sun as a whole, the phenomena mentioned being those which can be studied in any part of its atmosphere. We may now refer to certain specific phenomena, which occur from time to time in different parts of the sun's surface, for example, the sun-spots. These were seen by Galileo when he first directed his telescope to the sun, but the difficulty of interpreting them has been very great. Prior to the beginning of the work on Mount Wilson, the spectra of sunspots had been observed visually, but had never been photographed on a large scale. Experiments with this end in view, begun in Chicago at the Kenwood Observatory in 1891, and continued at the Yerkes Observatory, were finally carried out successfully on Mount Wilson, with the aid of the Snow and tower telescopes. Then followed the work of interpretation, and here again we must fall back upon the laboratory. An electric furnace provides the means of heating iron vapor up to 3,300° Centigrade. By making photographs of its spectrum at high and comparatively low temperatures, we find that at the lower temperature certain lines are strengthened while others are weakened. As the lines which become relatively stronger when the temperature is reduced are also strong in sun-spots, we infer that sun-spots are cooler than the surrounding solar surface. It is thus possible for certain chemical compounds to exist in spots, such as magnesium hydride and titanium oxide, which are not found in the hotter regions outside of spots, where they are doubtless broken up by the intense heat. Thousands of lines belonging to these compounds have been identified on our plates with the corresponding lines observed in the laboratory.

THE 60-FOOT TOWER TELESCOPE

THE FIRST-BUILT AND SMALLER OF TWO UNUSUAL TELESCOPES THAT ARE TRAINED VERTICALLY UPON THE HEAVENS, AND THAT BRING THE IMAGES OF THE STARS DOWN TO THE OBSERVATION HOUSES

Meanwhile, since its first use at the Ken-

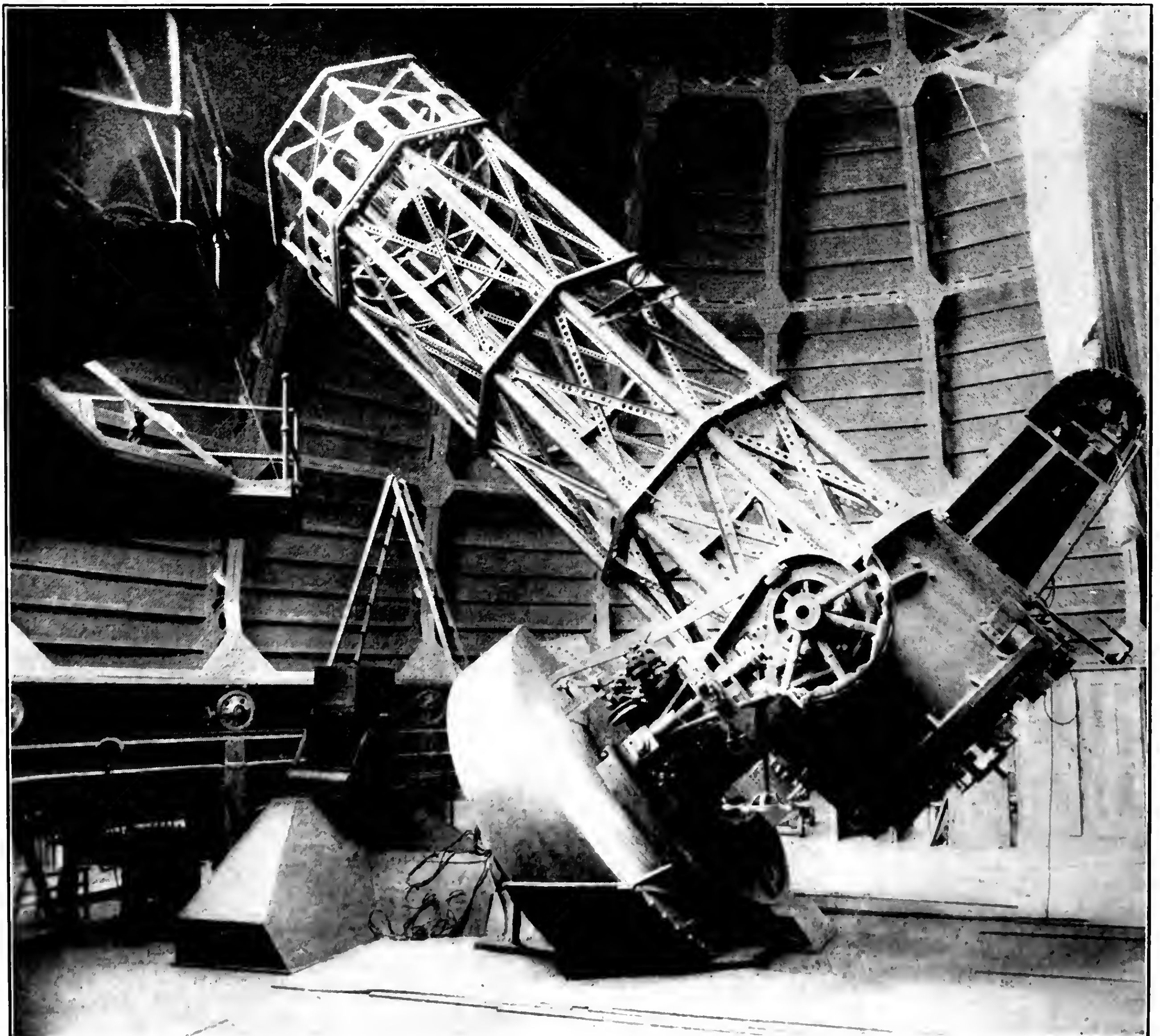


THE NEW TOWER TELESCOPE

THAT HAS A FOCAL LENGTH OF 150 FEET

wood Observatory in 1891, the spectroheliograph has been applied to the solution of many solar problems. This instrument permits the sun to be photographed with the light of any single element, such, for example, as calcium or hydrogen. The earliest photographs with the light of calcium showed that sun-spots are surrounded by enormous areas of luminous calcium vapor, floating in the solar atmosphere, which are quite invisible when the sun is observed visually or photographed in the ordinary way. These are bright regions in the sun's atmosphere. Later, at the Yerkes Observatory, immense dark clouds of hydrogen gas were discovered, of similar form, but showing different details of structure. In 1908, by photographing the sun with the red line of hydrogen for the first time, we found at Mount Wilson that definite vortices, or whirlpools, are associated with sun-spots. These exist at a high level in the sun's atmosphere, and thus had not been clearly recorded in previous photographs with other hydrogen lines, which represent lower regions. Their existence suggested that a sun-spot might be analogous to a terrestrial tornado. Fortunately, a definite method of settling this question was available.

In 1876 Sir William Crookes detected the minute charged particles shot out from the negative pole of a vacuum tube, now well known as "cathode rays." These electrons are the fundamental units of electricity, traveling in the tube at high velocity and capable of deflection by a magnet. Sir Joseph Thomson and others have shown that they are also emitted from flames or from such highly heated



A MIGHTY TELESCOPE —
THE 60-INCH REFLECTING TELESCOPE, WITH A STELLAR SPECTROGRAPH ATTACHED

— AND ITS HOME

THE REVOLVING DOME THAT SHELTERS THE OBSERVERS WHO USE THE BIG TELESCOPE

bodies as the carbon filament of an incandescent lamp. They must consequently be present in the sun in great numbers. Suppose a mass of these electrically-charged particles to be whirled in a vortex — what must happen? We know that by rotating an electrically-charged body at a high velocity a magnetic field is produced. Hence, if a sun-spot is really a vortex, the whirling charges in it should produce a magnet, precisely analogous to the electro-magnet which results when an electric current is passed through a spiral coil of wire.

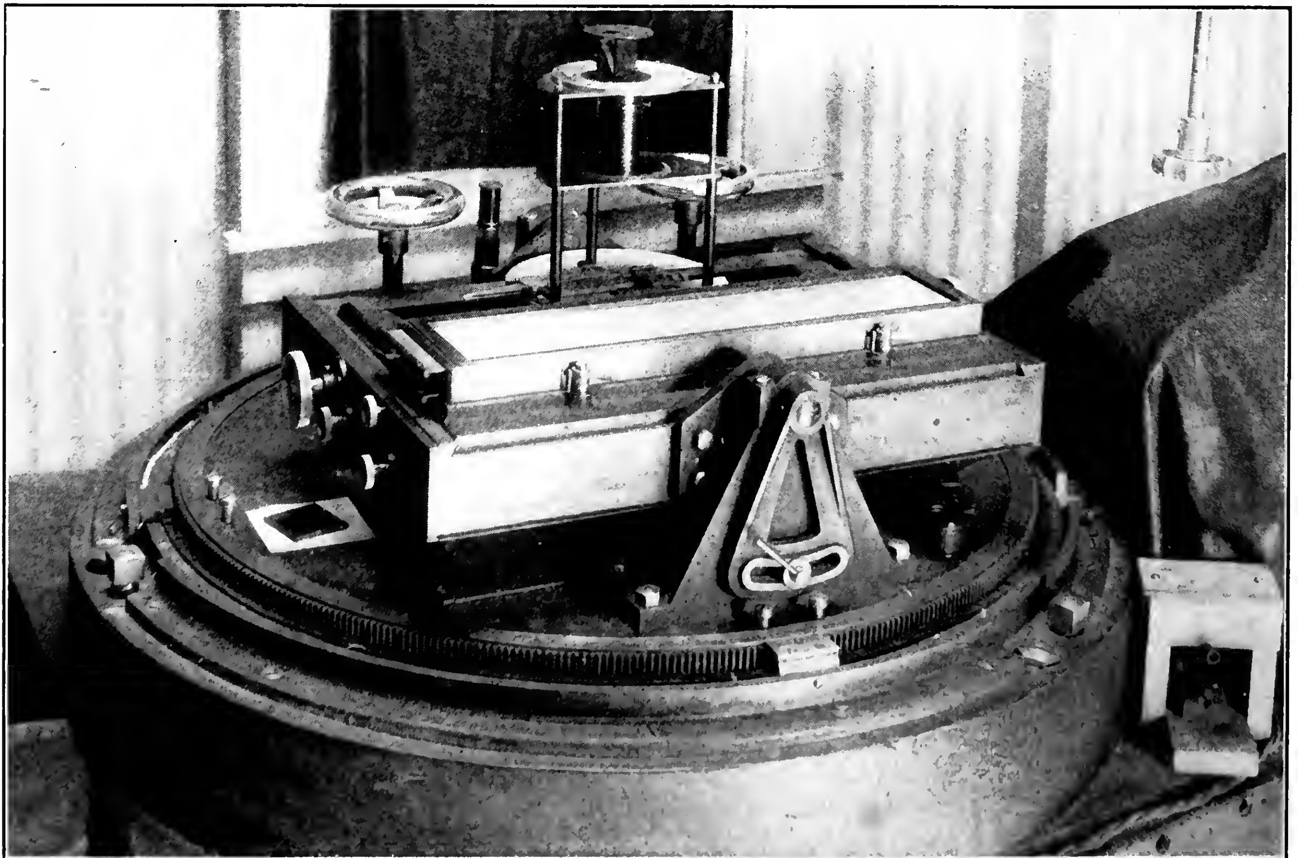
But, at a distance of 93 million miles from the sun, how are we to detect such magnets, if they exist? The discovery of the effect of a magnetic field on light, made in 1896, provides the necessary means. This discovery was that the lines in the spectrum of a vapor, single under ordinary conditions, are split into two or more components when the vapor is radiating between the poles of the magnet. Moreover, the light of these components is polarized in a characteristic and unique way, so that if we find such lines in any radiation, we may be sure that the source of the light is in a magnetic field.

For years it had been known that some of the lines in the spectrum of a sun-spot were double, but this appearance had always been attributed to another cause, having nothing to do with magnetism. Guided by this reasoning, we applied the necessary tests with the tower telescope on Mount Wilson, which had been devised for work of this kind. The results left no room for doubt. They proved that sun-spots are great electric vortices, producing within them powerful magnetic fields. Such vortices, when whirling in opposite directions, cause magnetic fields of opposite polarities. Thus electro-magnetic phenomena were demonstrated to exist outside of the earth, on a scale vastly transcending anything attainable here. The investigation not only indicates the essen-

tial nature of sun-spots, but shows that electrical and magnetic effects must play a great part in other stars, some of which are enormously larger than the sun.

It should be added that terrestrial magnetic storms are not due to the direct magnetic effect of sun-spots. In common with the aurora, they are probably caused by electrically charged particles, shot out from the sun and drawn in toward the magnetic poles of the earth. Professor Störmer, of the University of Christiania, to whom (and his colleague, Professor Birkeland), this theory of the aurora is due, has recently been at Mount Wilson investigating mathematically the action of sun-spots on the electrically charged particles shown in our photographs of the solar atmosphere.

The instruments and methods employed in this work are for the most part new, devised by the members of the staff and constructed in the Observatory instrument shop. Among these are the Snow telescope, which reflects a beam of sunlight horizontally into a long house, prevented from heating by louvered walls. The beam falls upon a silvered concave mirror, which forms an image of the sun, about 6½ inches in diameter. This is photographed daily with the spectroheliograph. Experience with the Snow telescope suggested that for some kinds of work important advantage might result from the use of a vertical rather than a horizontal beam of light, and the first tower telescope, 60 feet high, was constructed. Here the spectrograph and spectroheliograph, 30 feet in length, are mounted in a well excavated in the rock beneath the tower. This experimental instrument proved to be so satisfactory that a new tower telescope, 176 feet high, has been recently erected on the mountain. This gives an image of the sun 16½ inches in diameter, which is studied with a combined spectrograph and spectroheliograph 80 feet long, in a well beneath the tower. In spite of its great height, the new tower has proved to be perfectly stable, and many important results have already been obtained with it. For one thing, it is possible with this instrument, on any good day, to photo-



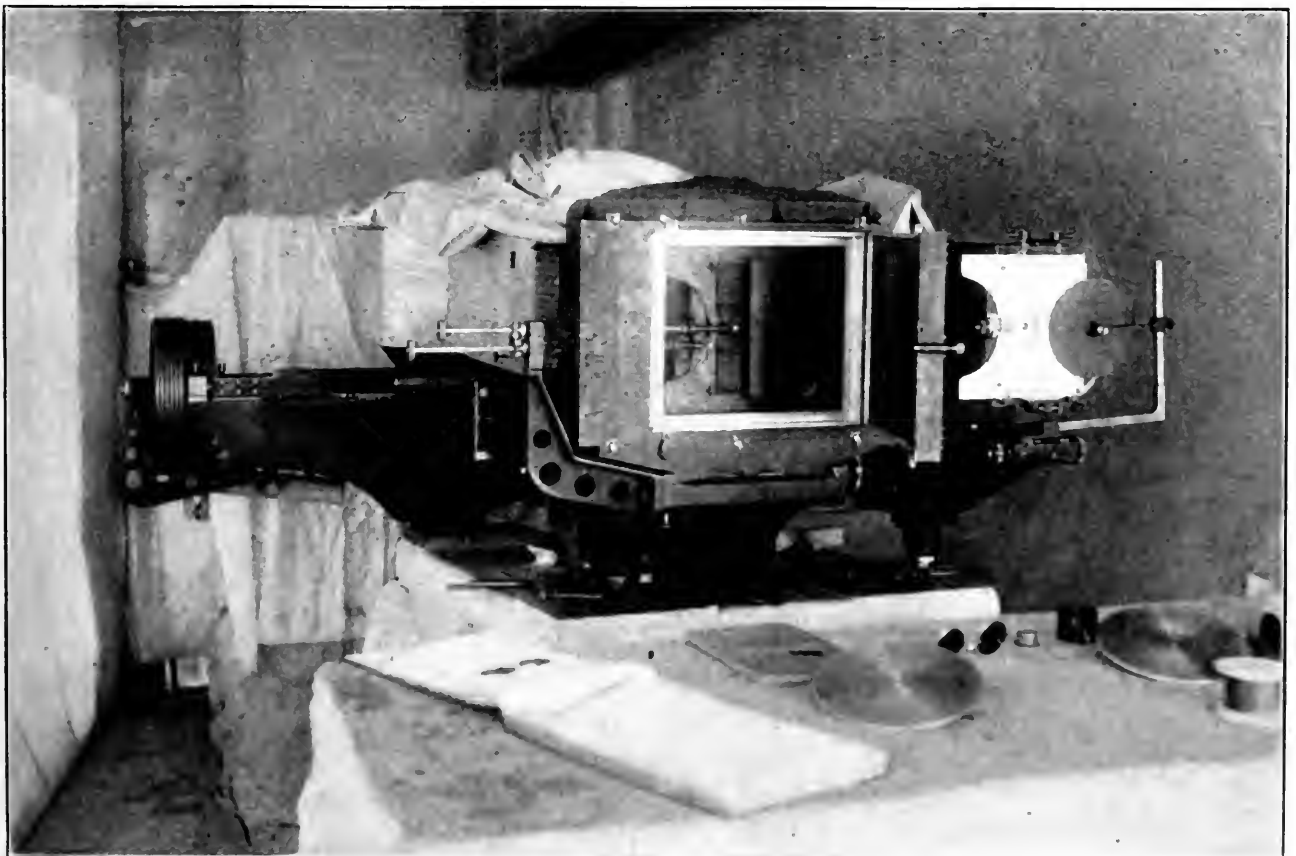
TWO INSTRUMENTS THAT ARE

THE 30-FOOT SPECTROGRAPH WHICH CATCHES THE PHOTOGRAPHS OF THE SPECTRA OF THE STARS WHOSE CHEMICAL ELEMENTS ARE THUS DETERMINED

graph the "flash spectrum." This is the spectrum of the luminous atmosphere of the sun, which appears as a thin crescent for only an instant, just as the dark body of the moon covers the sun at a total eclipse. It is now an easy matter, not only to photograph all the bright lines previously observed only at eclipses but to determine their chemical origin and physical condition much more accurately than can be done during the brief duration of the "flash."

So much for the sun, which, as already mentioned, is studied as a typical star, near enough the earth to be examined in detail. The other stars, which are very remote from the earth, must be observed by telescopes of a different type, capable of collecting a great amount of light and concentrating it in a sharply defined image. In the 60-inch reflector a silvered concave mirror, five feet in diameter, is supported at the lower end of a skeleton tube, so mounted that it can be driven by clock work, at a rate exactly counteracting the rotation of the earth. Thus the star images, falling upon a photographic plate, can be kept there motionless for hours together, so that the faintest objects can be recorded. On account of the great size and perfection of this telescope, stars fainter and more distant than any previously known can be photographed with it. In the same way the structure of the nebulæ, notably that of the beautiful spirals, is brought out in exquisite detail, so that many new possibilities of investigation have been opened.

The 60-inch reflector is used for a variety of observations bearing upon stellar evolution. For example, a series of photographs is being made of the nebulæ catalogued by Sir William Herschel, for purposes of classification and measurement. Herschel, working before the days of photography, was able to see these objects very imperfectly, though it is doubtful whether his drawings could be much surpassed by a visual observer to-day. In the great work of Keeler at the Lick Observatory, it was found that the most common form of nebulæ is the spiral, of which hundreds of specimens exist. It is probable that many stars have their origin



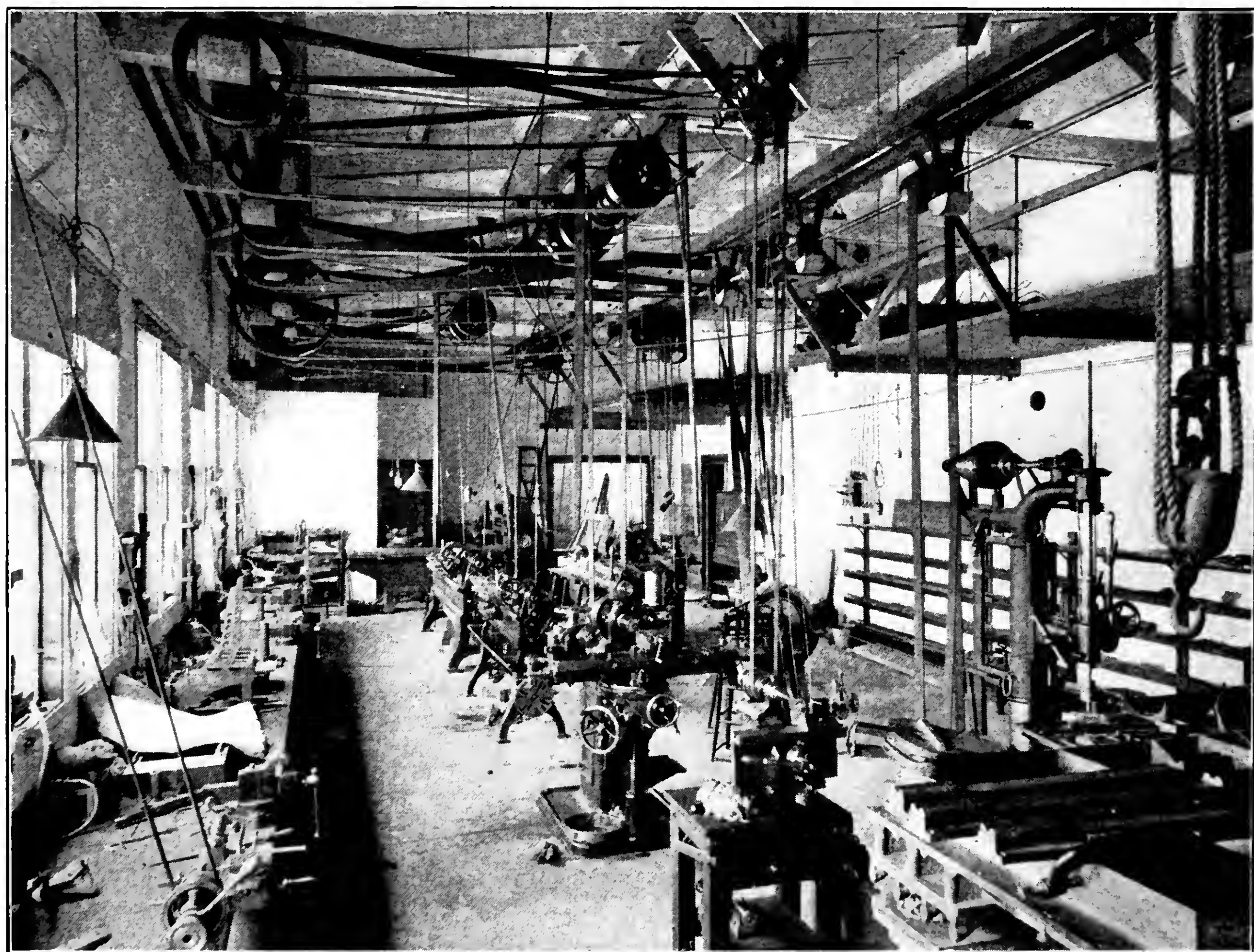
USED AT THE MT. WILSON OBSERVATORY

THE SLIT-END OF THE 5-FOOT SPECTROHELIOGRAPH WITH WHICH THE ASTRONOMERS PHOTOGRAPH THE STRATA OF THE SUN'S ATMOSPHERE

in such spirals, and that we see here the process of world-formation in actual operation. But the scale of these objects is so vast that no change in their form has yet been detected, even after the lapse of years, and in spite of the undeniable marks of rapid motion which they exhibit.

So it is with the stars: we cannot watch the life-changes of a single star, as they occupy millions of years. We must pick out specimens of young, middle-aged, and old stars, and study them with every means at our disposal. The spectra of several thousand stars are being photographed with the 60-inch reflector. These yield a measure of the velocity with which each star is moving toward or away from the earth, reveal their chemical composition, permit binary systems to be detected through the relative motions of the components, and provide material for the classification of the spectra and the study of stellar evolution. Thus we distinguish the white or bluish-white stars, which may have formed from nebulæ in comparatively recent times; the yellowish stars, of greater age, among which our sun belongs; the orange stars, with fading light; and the red stars, some of which probably represent the last stages of stellar life.

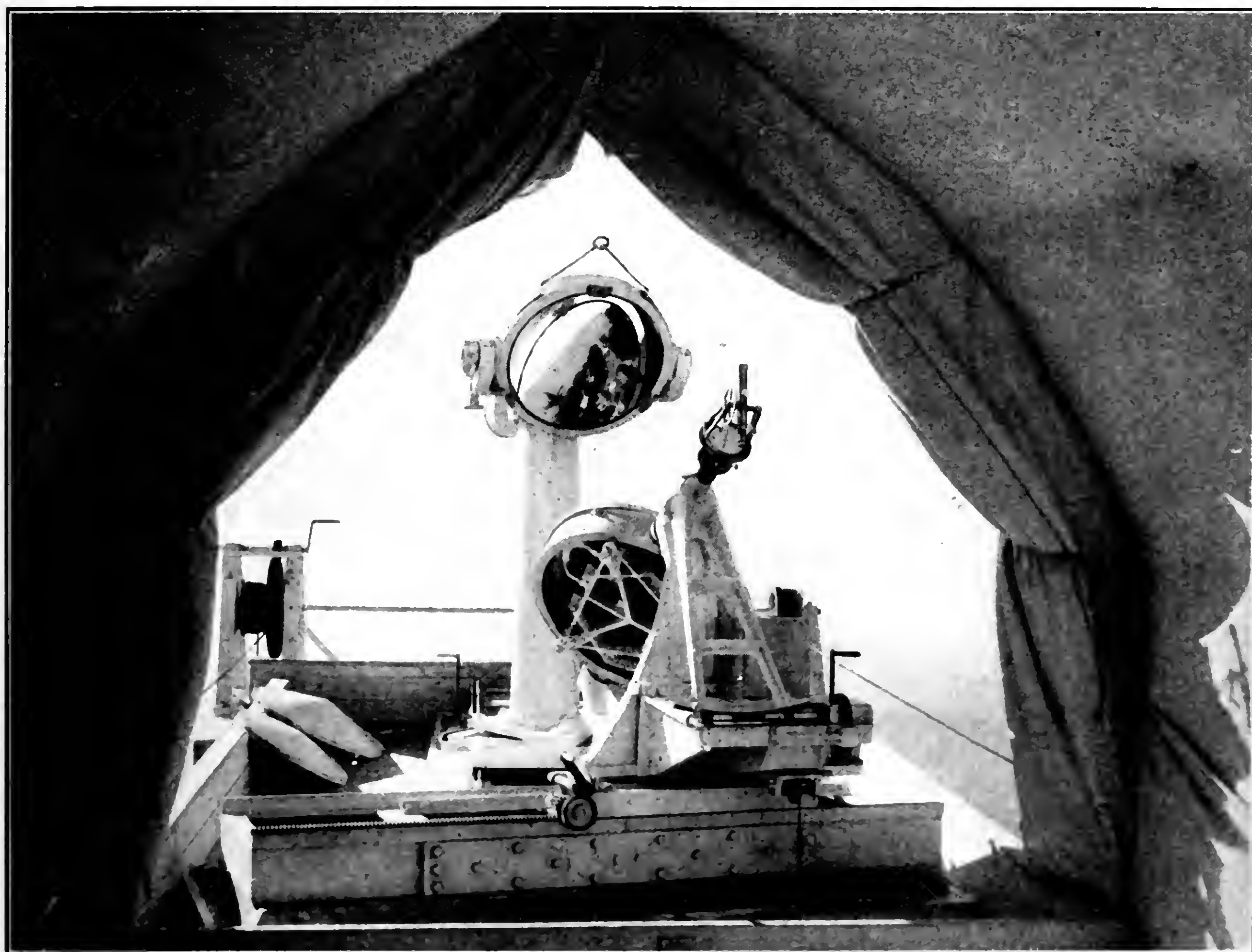
The researches of Professor Kapteyn, the great Dutch astronomer, who spends his summers on Mount Wilson as a Research Associate of the Carnegie Institution, relate especially to the distribution and grouping of the stars in space, and their motion in systems. Many of the observations with the 60-inch reflector are employed in these investigations, and the problem of stellar distribution is studied in close connection with that of stellar development.



THE OBSERVATORY'S INSTRUMENT SHOP AT PASADENA
IN WHICH NEW DEVICES FOR ASTRONOMICAL RESEARCH ARE MANUFACTURED AND OLD PARTS REPAIRED

It is expected that a great telescope, still more powerful than the 60-inch, will ultimately be available for such work. After a long series of tests a disk of glass, 100 inches in diameter and 12 inches thick, has been found suitable for use in this

telescope, and the construction of the dome and mounting will be pushed forward as rapidly as possible. Meanwhile, the laborious operation of giving the glass a perfect optical surface will be completed. The grinding and polishing is done in the optical shop of the Solar Observatory in Pasadena, near the base of Mount Wilson. Complete equipment is provided for work of the highest precision. Two 60-inch and two 30-inch mirrors have already been made, besides many of smaller diameter, for the tower telescopes and other instruments of the Observatory. A well equipped machine shop has also proved of great advantage, as it has permitted the construction of many instruments of special design under the supervision of the members of the staff. The possibility of building a special instrument in accordance with the investigator's needs, and the ability to modify and improve it as new ideas develop, are material aids in new and unfamiliar fields of research. The work of the shop ranges from the small details of delicate laboratory instruments to cutting the teeth of the ten-foot worm gear that drives the 60-inch telescope.



THE MOST EFFECTIVE INSTRUMENT FOR THE STUDY OF THE SUN

THE SNOW CŒLOSTAT, WHICH CATCHES A STATIONARY IMAGE OF THE SUN AND REFLECTS IT INTO THE OBSERVATORY TO BE PHOTOGRAPHED

Of more fundamental importance is the physical laboratory in Pasadena, where celestial phenomena are experimentally imitated in electric furnaces, vacuum tubes and high potential sparks. Here the influence of a magnetic field, or of high and low pressure, varying temperature, or any change of physical or chemical state can be observed. The laboratory is thus an indispensable aid in the interpretation of the phenomena observed in the sun and stars. This work of interpretation is, of course, the primary object of the Observatory. For it should never be forgotten that the accumulation of observations is only an incident in the work of such an institution. To extract from such data their full meaning is a task worthy of the best efforts of the staff, aided by the most refined methods of modern science.

"JIM" CALDWELL, COÖPERATOR

AND LAKEFIELD, MINN., IN WHICH HE HAS ORGANIZED GRAIN ELEVATORS, A GENERAL MERCHANDISE STORE, A NATIONAL BANK, AND A CREAMERY INTO SUCCESSFUL COÖPERATIVE ENTERPRISES

BY

FRANK PARKER STOCKBRIDGE

LAKEFIELD, Minn., is a coöperative town — probably the most completely coöperative community in the United States.

The 1,200 inhabitants of this thriving Jackson County village represent about 250 families, and there is hardly a family in the village or in the rich farming country adjacent thereto that is not represented in one or another, or all, of the coöperative enterprises which have been developed in the last few years. There is a coöperative grain elevator, a coöperative creamery, a coöperative store, and even a coöperative national bank. The coöperative idea has spread even to the churches — the Baptists and the Presbyterians have combined with the Methodists to form one vigorous and aggressive congregation instead of three weak and numerically insignificant groups of worshippers. It might almost be said that the coöperative idea has reached the saloons. At least, since coöperation became the order of the day in Lakefield, one of the three saloons has gone out of business and the patronage of the second has fallen off seriously. This decrease in the number of saloons, however, illustrates only one phase of the coöperative idea — the principle that no town should support more retail establishments than are necessary to supply the wants of its inhabit-

PICNIC DAY OF THE COÖPERATORS

MANY OF WHOM COME TO LAKEFIELD, MINN., IN THEIR AUTOMOBILES TO CELEBRATE THEIR SUCCESS WITH COÖPERATIVE ENTERPRISES

ants. So far there has been no attempt to sell shares in a coöperative saloon to the farmers of Jackson County.

One man is responsible for converting Lakefield from a rather sleepy and backward rural village, with all the antagonisms and pulling at cross purposes among its inhabitants that are usually found in country towns, to a prosperous and progressive community — a town in which community of effort is now recognized, by all but a few individuals who see their pocketbooks threatened by the new order of things, as the solution of many of the biggest problems that confront the American people both in the rural districts and in the cities as well.

COÖPERATIVE ELEVATORS AT LAKEFIELD

WHICH HANDLE MORE GRAIN THAN THE THREE RAILROAD-OWNED ELEVATORS AND PAY THE FARMERS SEVERAL CENTS MORE A BUSHEL

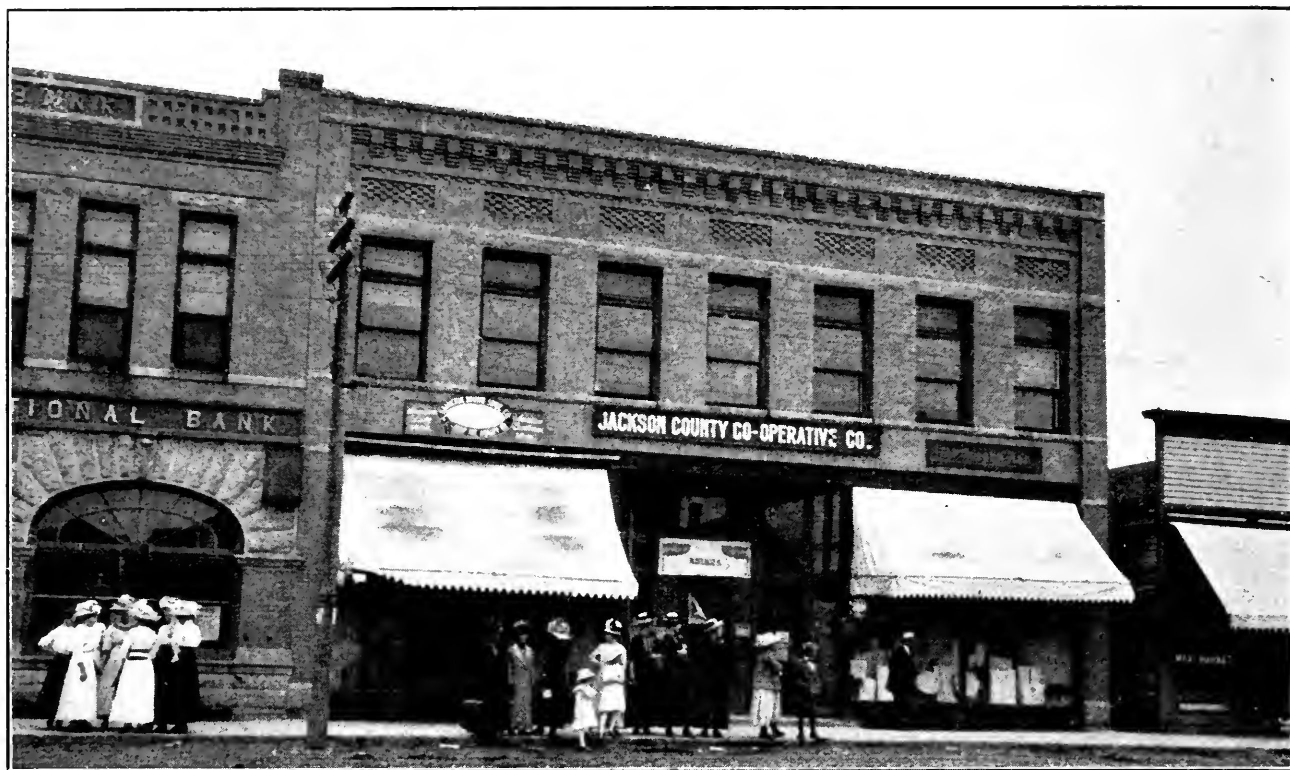
That one man is Mr. James C. Caldwell. They call him "Jim" over all Jackson County. He is secretary of the Farmers' Elevator Company, secretary of the Coöperative Creamery Company, president of the Coöperative Store Company, president of the National Bank, easily the foremost citizen of his town and of his county, of pretty nearly all Southern Minnesota, and before he gets through he is going to be recognized as one of the foremost citizens of the entire Northwest. And he is plain Jim Caldwell to everybody.

Jim is a farmer. He became a coöperator and a bank president and all the other things by accident. But the enthusiasm with which the people of Lakefield have thrust the burdens of leadership upon Jim Caldwell is a striking illustration of the eagerness of the American people for strong and intelligent men to point the way and to show them how to work together for the common good.

Jim Caldwell's parents came from Scotland — that may account for many things, including his power of imagination and his determination to see things through once he has started them. Born on a Wisconsin farm, he taught a country school for eight years, bought a farm of his own near Madison, sold it a few years later and bought another near Lakefield, Minn., which he sold in 1903, realizing about the only considerable cash profit that the ordinary farmer ever makes — the profit from the increase in the value of his land.

"It was my idea to go over to South Dakota, where land is cheaper," Jim Caldwell told me, "but first I thought I could make a little money buying and selling land in Jackson County, so I opened a real estate office here in Lakefield. I guess it was because I had less to do and more time to do it in than any one else in town that I got interested in the coöperative idea. At any rate, it became very clear to me that unless the grain-growing farmers got together and provided their own means of marketing their products, they stood a good chance of never getting any profits from their crops. So we organized the coöperative elevator company."

The railroad company owned three elevators — "line" elevators they call them in the Northwest — that were operating in Lakefield when Jim Caldwell began the organization of the farmers' coöperative enterprise in 1905. One hundred and twenty-five farmers subscribed a capital of $7,900 and erected their first elevator.



THE BIGGEST STORE IN LAKEFIELD, A COÖPERATIVE STORE

BOUGHT BY THE FARMERS AND OTHER USERS OF SUPPLIES, IT SELLS GENERAL MERCHANDISE TO THEM AT AN AVERAGE SAVING OF 8 TO 10 PER CENT.

It paid from the start. The first year the net earnings were 12 per cent., the second 5 per cent., and since then 8 per cent. a year has been paid and a considerable sum has been passed to the surplus account, which is now more than $7,000. In 1908, the capital was increased to $10,900 and a second elevator was built. Now the Farmers' Coöperative Elevator Company is doing more business than the three "line" elevators put together — handling yearly 520,000 bushels of oats and barley for its four hundred customers, paying them an average of three cents a bushel more than they can get anywhere else, besides paying the regular 8 per cent. dividends to its 146 farmer stockholders. Nor is this the entire measure of the benefits to the Lakefield farmers from coöperative effort in this direction alone. Their elevator company is not only their selling agent but their purchasing agent as well, and through it they are buying such commodities as coal, feed, flour, drain tile, salt, posts, and agricultural implements at a considerable saving.

Of course, the success of the coöperative elevator made enemies for Jim Caldwell, because it interfered with some one's private profits. But Caldwell came of fighting stock and didn't care. Besides, the farmers of Lakefield Township were his friends.

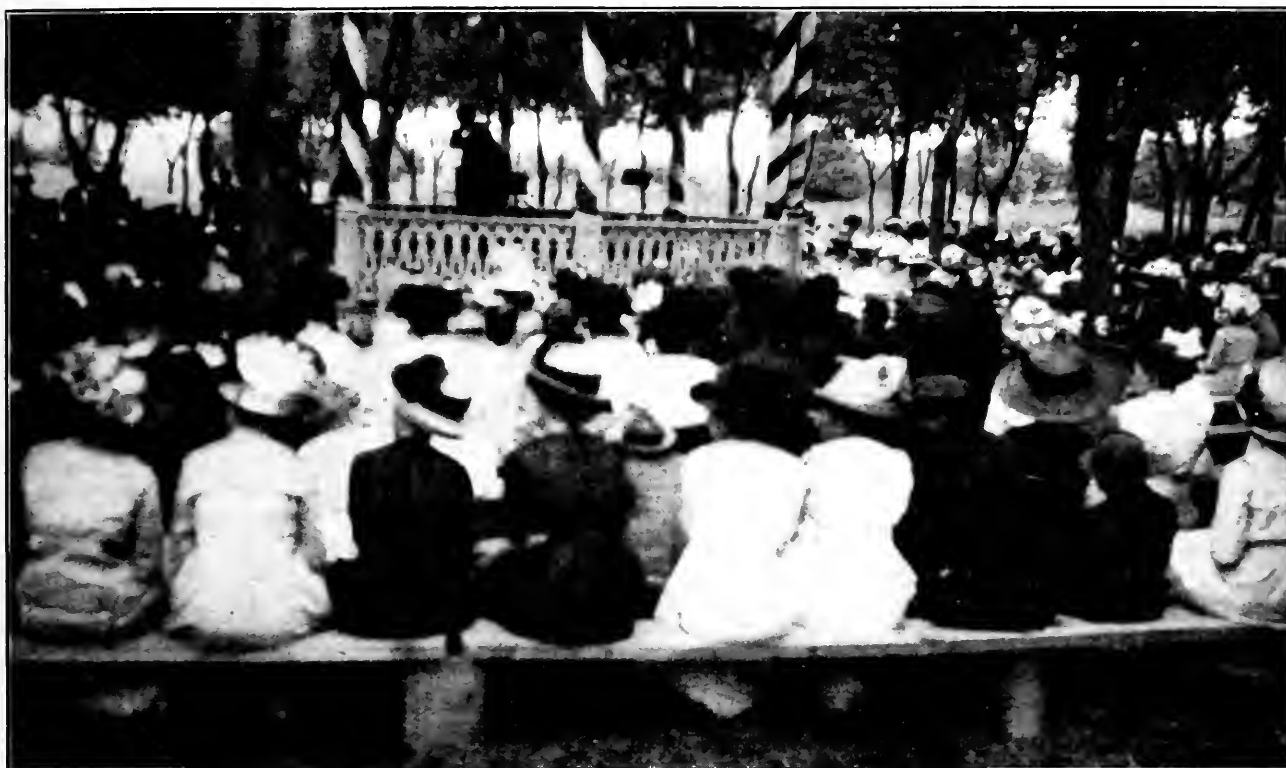
There were two banks in Lakefield— a national bank and a state bank. The national bank found itself in difficulties, in the winter of 1905-6 — or, at least, some of its officers, who were also its largest stockholders, were in difficulties, although the bank's condition otherwise was reasonably healthy. Some of Jim Caldwell's friends who were directors of the bank asked him to try to straighten things out.

"Why, I'm not a banker," said Jim. "I don't know anything about banking."

"But you've got horse sense and you're honest," was the reply. "We want you to see what you can do."

So Caldwell took hold. He undertook to find buyers for the largest blocks of stock, and the farmers bought it because of their personal confidence in him for his success with the coöperative elevator.

Jim Caldwell had begun at this time to believe in coöperation as the solution for all economic problems. He studied the national banking laws and found in them many handicaps to a genuinely coöperative bank. Nevertheless, he determined to make the First National Bank of Lakefield



COÖPERATION MORE INTERESTING THAN POLITICS

A BIG CROWD OF FARMERS AND THEIR WIVES, AT THE ANNUAL PICNIC, LISTENING TO A SPEECH UPON THE VALUE AND THE METHODS OF COÖPERATIVE BUSINESS

as nearly a coöperative institution as possible. He got the directors to agree with him that no more than $500 worth of stock should be sold to any individual, and he got the stockholders to agree not to sell to one another without first giving the bank an opportunity to find a purchaser who was not already a holder of shares. Thus, by a "gentlemen's agreement," he put into effect one of the cardinal principles of true coöperation, namely: the limitation of the interest of any individual shareholder in the coöperative venture. And after he had distributed the $36,000 of bank stock among 76 farmers and farmers' wives, they elected Jim Caldwell president.

The coöperative idea in banking, so far as it could be carried out under existing laws, has been a success in Lakefield. The "motto" of the First National, prominently displayed on its stationery and advertising matter, is:

Everybody's bank — owned by no clique — caters to no class — seeks only the legitimate banking business of all honest men in this community.

And it lives up to that declaration of principles and to its announcement, familiar to everyone in Jackson County:

This bank is not and cannot be used to serve private interest. No one man owns more than ten shares of its capital stock. It is owned by many stockholders scattered through the entire community, and to serve the entire community is its unvarying policy.

So far as the banking laws will let him go, Jim Caldwell has introduced new banking methods and ideas into Jackson County — the principal new idea being that any honest man who is able and willing to pay his debts is as much entitled to credit at the bank as he is at the store or at the blacksmith's shop, regardless of whether he votes the same party ticket as the bank president does, deals at the vice-president's harness shop, or buys coal from the chairman of the loan committee. And that the farmers and villagers of Lakefield appreciate this kind of banking and have confidence in it, and in Jim Caldwell, is proved by the figures that show an increase of nearly $200,000 in deposits above the $195,000 which the First National Bank had when the new policy was put into operation.

By the time he had got this innovation in rural banking well under way, Jim Caldwell had given up the idea of going to South Dakota. Lakefield had adopted

him and was depending upon him. Of course, he had made more enemies, principally among the shareholders and directors of the state bank whose membership included some of the principal merchants of the town. But he still had back of him the farmer stockholders in the coöperative elevator, now reinforced by the farmer stockholders in the First National Bank, and — he enjoyed a fight.

Two years passed. The coöperative elevator company, with Jim Caldwell as secretary, was running smoothly; the coöperative First National Bank, with Jim Caldwell as president, was growing in financial power and influence; and the people of Lakefield were becoming used to the coöperative idea. Conditions were ripe to start something else in the coöperative line. The Right Relationship League, of Minneapolis, whose activities in organizing coöperative stores throughout the Northwest I have described in a previous article in the WORLD'S WORK, had proved its mastery of the basic principles that are essential to successful coöperative merchandizing, and Lakefield offered an inviting field for its operations. There were two general stores in town. The proprietors of both offered to sell out. One of them put a highly inflated value on all his stock in trade, and negotiations with him were quickly dropped. The other and larger store proved to be worth, conservatively, about $13,000 for stock, good will, and fixtures. One hundred and thirty-one farmers and village residents agreed to buy shares at $100 apiece in the new company and to do their trading therefore at the coöperative store. Then the question of financing a purchase for which the purchasers were unable to put up the cash arose. Every subscriber was good for many times the amount of his subscription, but, as with most farmers, $100 in immediate cash meant a real strain until the season's crops were marketed, and this was in the spring of 1908. Cash was needed with which to pay for the store property and to provide working capital, and Jim Caldwell agreed to provide it.

THE COÖPERATIVE CREAMERY AT LAKEFIELD

THAT HAS ENABLED THE FARMERS TO MAKE MORE MONEY FROM THEIR BUTTER-FAT ALONE THAN THEY FORMERLY MADE FROM ALL THE PRODUCTS AND BY-PRODUCTS OF THEIR MILK

"You take these farmers' notes to run a year, or longer if they want them to run longer, and let the new company endorse them," he said. "Then bring them in to me and I'll see that you get the money."

To the ordinary student of economics it would seem that no bank would ever hesitate to lend money on that kind of security. The farmer's unendorsed note is good at any bank almost everywhere except in the United States, and the farmer's note endorsed by a company composed of his fellow-farmers is, on the face

of it, as nearly gilt-edged paper as any money-lender could desire. But banking in the United States, and particularly banking in the rural districts, is not done in that way. To the coöperative stores of the Northwest this problem of financing is particularly acute, because of the practical certainty, wherever a coöperative store is formed, that the proprietors of other stores, who do not fear competition so much as they resent the introduction of new business methods, are directors of one or all of the banks in the community. So, when Jim Caldwell offered to float the entire $13,000 of notes, he went down in the records of the Right Relationship League as one of the rare exceptions to the general run of bankers. But, of course, Jim was not a banker by training. He was simply an honest man with good business sense, unfettered by the American banking tradition that the farmer shall mortgage his farm, his live stock, his tools, his furniture, his family, and his hope of salvation before he is allowed the privilege of borrowing money at 10 to 13 per cent.

"JIM" CALDWELL

WHO HAS LED THE PEOPLE OF LAKEFIELD, MINN., TO COÖPERATE IN THE MANAGEMENT OF THE PRINCIPAL INDUSTRIES OF THE TOWN AND OF THE SURROUNDING COUNTRY

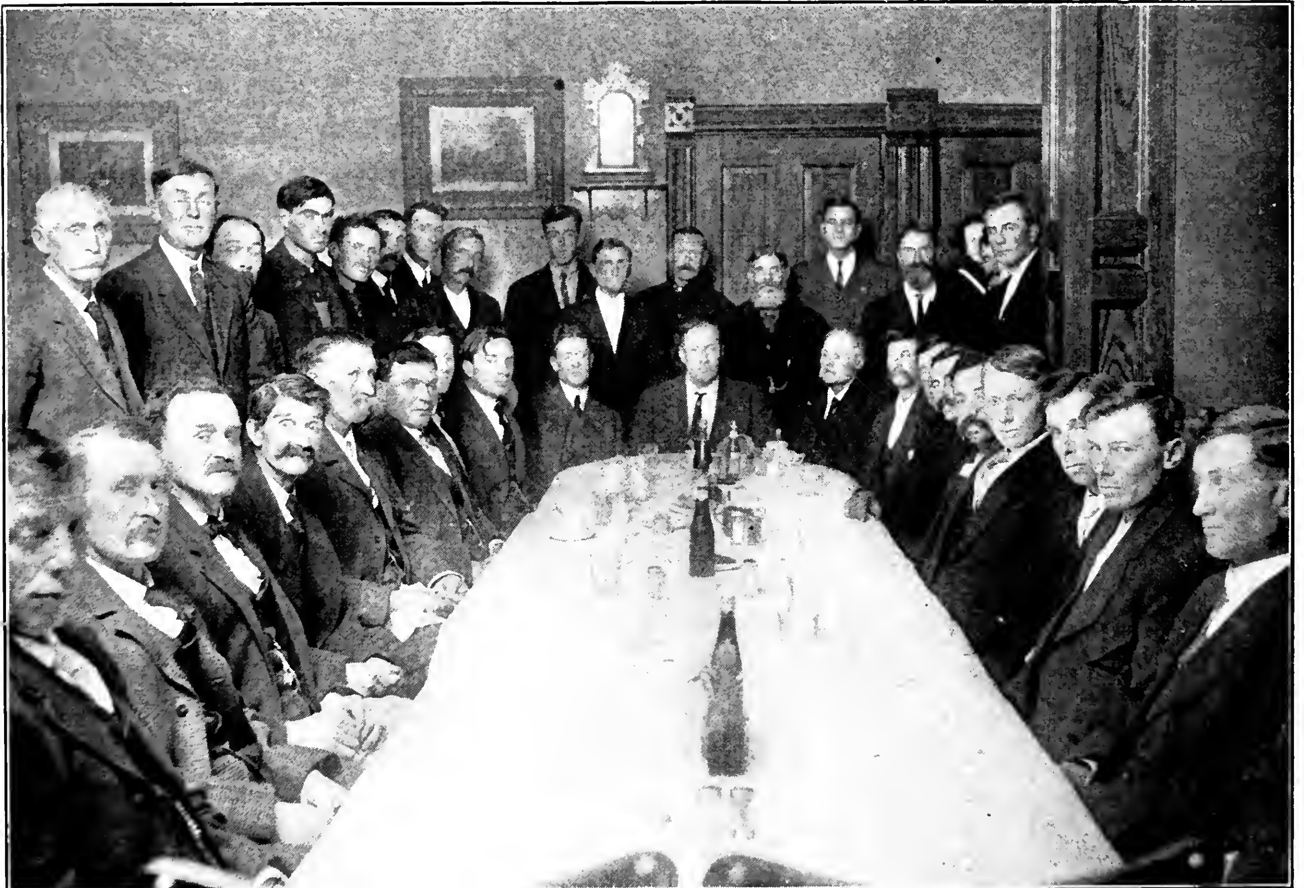
As it happened, the First National Bank did not carry the loan. No bank examiner could have found fault with it, but the bank had not yet placed itself in a position to add $13,000 in one lump to its outstanding bills receivable. So Jim Caldwell put the notes into one bundle and sent them to his brother, with a letter saying that this was about the best investment for an idle $13,000 that he knew of. The money came back by return mail and the biggest store in Lakefield, occupying part of the same building with the bank, became the property of the Jackson County Coöperative Company, and the directors of this new organization immediately elected Jim Caldwell its president.

There has been no more immediate and noteworthy success in the history of the coöperative movement in America than the success of the Lakefield store. The former owner of the business was barely able to pay off his debts with the $13,000 that he received for his stock. The statement of the company's accounts on January 8, 1912, as audited by the Right Relationship League, showed assets totalling $54,376, of which $43,018 was merchandise inventoried at cost, and liabilities of $14,006, leaving undistributed net earnings in the surplus and reserve funds of $17,770 above the total capital investment of $22,600—ninety-five additional farmers and villagers having become owners of a share of stock apiece since the original company was formed. And every one of the 226 stockholders, and about 250 non-stockholding customers of the store, has received annual rebates of from 5 to 10 per cent. of his total purchases — about $35,000 having been distributed in this way, besides a regular 6 per cent. dividend to the shareholders for the use of their capital. On total sales of $147,463 in 1911 the net profits, above all expenses, were $9,916. Nearly thirty persons are employed in the store, which deals in groceries, dry goods, notions, men's clothing and furnishings, women's ready-made garments, shoes, carpets, crockery, cut glass, silverware — in everything that comes under the head of "general merchandise." In addition, it buys and ships eggs and such small produce as

the coöperative elevator is not equipped to handle conveniently.

How the individual shareholder and customer of the Lakefield coöperative store profits by its existence is best told by concrete illustrations. Mr. S. L. Smalley, a farmer, invested $100 in a share of the company, when it was organized in the spring of 1908. He has received $24 in dividends on his stock. In 1909 he received a dividend on his purchases of $92. In 1910 he bought $1,890 worth of goods from the store and received in dividends $189. In 1911 — a year of almost total crop failures in Jackson County — Mr. Smalley's dividend on purchases was $66.91. In all he has saved, through the coöperative store and his ownership of stock, to January 8, 1912, $372. If he had not been a stockholder his dividends on an equal amount of purchases would have been half of that amount. Jim Caldwell has saved $246 in dividends; Miss Mary Flinn, $263; Mrs. A. Vancura, $343 — eighteen stockholders got back between them $4,193 in actual cash as their shares of the profits they had created. Some of the thriftier stockholders in the country do the shopping for many of their non-stockholding neighbors, charging no commission but accumulating dividends that come back to them in cash at the year's end.

Although Lakefield lies in a rich dairying district, two privately owned creameries in the village had failed. The need of a creamery was there and the farmers saw it. So did Jim Caldwell. What more natural, since they had learned something about coöperation, than to start a coöperative creamery? That is what they did, with Jim Caldwell at the head. It was organized in July, 1911, on the basis of one share to a cow, with 1,700 shares divided among 118 stockholders. In the first six months it did $10,000 worth of business and in the second six months $14,000 worth, shipping its butter to Philadelphia, where it sold at half a cent a pound above the current New York City quotations for the best creamery butter, bringing an average of 28 cents a pound,



THE SOCIAL SIDE OF COÖPERATION

ONE OF ITS MOST VALUABLE SERVICES IN A RURAL COMMUNITY BECAUSE IT CLEARS UP MISUNDERSTANDINGS AND DISSIPATES PETTY JEALOUSIES

the profits of which, divided among the shareholders, have yielded them a 6 per cent. dividend on their investment above the price received for their cream.

If nothing more than dollars and cents were involved in the coöperative movement as practised in Lakefield it would still be a great thing for the town. But the coöperators — and that means almost everybody — have acquired the habit of getting together, and once you get people into the habit of getting together they forget their neighborhood difficulties, forget the petty jealousies and meannesses that have kept them apart, rub off the sharp angles caused by isolation, and find many new things that they can do in common for the common good. And that is just what has happened, and is happening, in Lakefield.

I was in Lakefield on June 20, 1912, the day of the coöperators' picnic. There wasn't hitch room left for another horse anywhere in town by nine o'clock in the morning. Farmers and their families drove in from points as far as twenty miles away, to take part in the festivities and to renew acquaintances with their neighbors — for all coöperators are neighbors in Jackson County. There were thirty or forty automobiles, many of them owned by the farmers. More than half the houses in Lakefield closed up for the day while the whole family went to the picnic. A parade of automobiles, bearing banners inscribed with the facts and figures about the coöperative enterprises of the town and headed by the village band, led the way to the park. There speeches were made from the band-stand, to which a couple of thousand people listened. Then luncheon from the well-filled baskets, then a "tug-of-war," then everyone went down to the ball grounds and saw the Lakefield coöperative "nine" wipe up the ground with the non-coöperative baseball players of the village of Jackson. And everybody went home that night with a good deal more of the neighborly spirit and a host of new friends.

There are still a lot of coöperative things to be done in Lakefield, but not nearly so many are undone as there are in most other American communities. Jim Caldwell has a few things in the coöperative line still up his sleeve. He is going to Europe next May as one of the Minnesota delegates to investigate at first hand the agricultural credit systems of Germany, France, and Italy, and it is a safe bet that one of the first places in America where the prototype of the Raiffeisen banks will be started will be Lakefield, Minn.

RURAL CHURCHES THAT DO THEIR JOB

HOW REV. R. H. M. AUGUSTINE, OF HANOVER, N. J., AND OTHER RURAL PASTORS ARE FILLING THEIR PEWS WITH PEOPLE WHO ARE WILLING TO HEAR THE GOSPEL PREACHED BECAUSE THEIR CHURCHES HAVE FIRST HELPED THEM TO SOLVE THEIR ECONOMIC AND SOCIAL PROBLEMS

BY

FRED EASTMAN

"WHAT are your churches around here doing?" I asked a Missouri farmer.

"Holding meetings and taking collections," he replied.

That is the programme of most country churches to-day — holding meetings and taking collections. There was a time — back in pioneer days when country people seldom got together in any sort of meeting and the minister was also the newspaper and magazine — when the institution that held meetings and took collections was a

necessary institution. That such a programme is no longer needed is proven because thousands — perhaps ten thousands — of the institutions that offered it have been abandoned. Thousands of others might as well be abandoned; they are "only walking around to save funeral expenses." In eight counties in Pennsylvania, investigation revealed that 24 per cent. of the churches are losing ground, 26 per cent. are standing still, and only 50 per cent. are making any headway at all. In thirteen counties studied in Illinois, 30 per cent. are retreating, 26 per cent. are marking time, and only 44 per cent. are moving forward. Less than half of the churches in counties that have been studied in Missouri and Indiana are making any advance. Kentucky and Tennessee present a similar situation. These are good agricultural states.

Convinced that the situation demanded not lamentation and tears but careful study, the Presbyterian Department of Church and Country Life sent several men into the field to make sociological surveys of dozens of typical counties. The writer was one of these men. We gathered information about economic conditions, population, transportation and communication, markets, social organization, recreation facilities, housing and public health, schools, and churches. Thus the church problem was studied in connection with the rest of the life of the people. Here is the resulting diagnosis:

The causes of the present decadence of the church lie deep-rooted in the economic changes of the last twelve years and the resulting social and moral stagnation. The price of farm land has more than doubled. But there has been no corresponding increase in the income derived from the land. The farmer has a larger capital but a smaller interest. Naturally he wants to sell, to convert his capital into cash and to put it where it will bring a larger interest. When he sells he moves, and when he moves he and his family go out of the country school and the country church and the community life altogether. This tends to make a shifting population in the country. Such a population is poor soil for schools and churches and community institutions of any sort. Community spirit and community pride die. Tenant farming increases. Old forms of recreation pass away and no new forms take their place. Morals, civic and personal, decline.

For attacking these new problems the church has presented no new programme. It has been stumbling along in the old ruts and wondering why it made no progress. It has been holding meetings and taking collections. It has gone on wastefully multiplying church buildings until to-day we have, in the Middle West and South at least, four churches where there is support for only one.

Moses Breeze says: "One proof to me that the church is divine is that it stays on earth and does business with so little business ability in it." And again, "What would you think of a bank that had to give an oyster supper once a month to pay its cashier?"

The church's ministers, as a rule, are still the circuit riders who live in town where they do not preach, and preach in the country where they do not live. Their message is individual and other-worldly. They talk of the beauties of Elysian fields, but allow the riches of corn fields and wheat fields to be squandered with prodigal hand. They do their best to pave the farmer's road to Glory Land, but they are little concerned about his road to the nearest market. They fight an untiring fight to teach the children God's word in the Bible, but they leave His word in the rivers and the hills, in the grass and the trees, without prophet, witness, or defender.

In other words, the country church is confronted by decreased profits, a shifting population, tenant farming, and social and moral stagnation. It is attacking that battle line with a programme of a few meetings and collections. It wont do. It can't stand at Armageddon and battle for the Lord with that sort of artillery.

Some churches realize it. A new country church is springing up. Confronted with the same problems, it is winning out. Let us look at one such church.

Four miles from Madison, N. J., in the historic village of Hanover, there is a

country church which has been holding its own and gaining in spite of economic change and shifting population. Here is the way it has done it:

The pastor, Rev. R. H. M. Augustine, soon after he was installed three years ago, seeing an appreciation of music among his people and a need for its development, organized "The Hanover Musical Society," which met regularly and enthusiastically from March to July. More than two score of musically inclined farm people joined the society. They practised for a musical festival that was held July 1st. The festival was held in the church and the church was crowded. After it was over sixteen members of the society organized themselves into a permanent choir for the church and they are there to this day. Interest in music has developed until now a pipe organ that cost $1,800 has taken the place of the old reed instrument

Meanwhile the pastor was busy along another line. Finding that the farmers of Hanover Community had no community celebrations, he worked up a Fourth of July celebration with patriotic exercises, fire-works, band concert, and such athletic contests as 50- and 100-yard dashes, sack- and three-legged races, relay race, tug-of-war, and baseball game. The whole thing was an experiment. Folks called it "The Pastor's Fourth of July." But it was such a success that it has been repeated every Fourth since, and to-day, instead of going to neighboring cities for their celebration, the farmers prepare to entertain visitors at their own.

Next came a bicentennial celebration of the settlement of the township. The church started this celebration, managed it and housed it. It began on a Friday evening with a banquet of the men of the parish, served by the Ladies' Aid Society. It was announced "for men only — and all the men." One hundred and eight men sat down to it, and when it was over they listened to addresses on "The World-wide Work for Men of America," "The New Interest of Men in the Work of the Church," "The Nation's Asset in Rural Manhood," and "Conservation in Our Community." The celebration lasted a week and every day had a programme all its own. Sunday was a "Day of Praise." Three hundred and sixty people flocked to the church and its chapels for worship, praise, and inspiration. Monday was "Country Life Day," with evening addresses on "The School House and its Place in Country Life," "Social Life in the Rural Community," and "The Home in the Country — Its Past, Present, and Future." The church was filled. Tuesday was "Agricultural Day," with a programme of specialists on "Agricultural Conditions and Problems of Northern New Jersey" and "The Effect of Changing Agricultural Conditions Upon Country Life and the Country Church." Wednesday was "Old Colonial Day," with a Colonial-Thanksgiving Day programme in the public schools and an evening "Olden Times Social" at the manse. The house was jammed. More than a hundred persons were in Colonial costume. There were two rooms full of a collection of relics of Colonial days in this community. Thursday was Thanksgiving Day, with a one-hour service in the church, in which the neighboring congregations united. Friday was "Old Home Day" for present and former residents, with a reception for reminiscences and the renewal of old friendships.

Perhaps it was inevitable that out of such a week of genuine enjoyment and stimulation of community pride the Hanover Community League should issue. Anyway, issue it did a few weeks later when a committee appointed at the men's banquet had gotten together and begun to take a serious look at themselves and their environment. And this was the object of the League: "To unite the men of Hanover Community in those activities which will conserve and promote such varied interests as the Social Life, Rural Literature and Education, Agriculture, Lectures and Entertainments, and Community Improvement." The membership of the League embraced every man in the community whether he would or no, and it began work at once. Here is a list of its accomplishments in 1911:

It arranged for large popular meetings in the interest of better agriculture; pro-

vided lectures on agricultural interests; promoted a corn growing contest in which twenty boys competed; held an exhibit (in the church) of community products of which there were 120 entries; observed Memorial Day by special exercises; celebrated the Fourth of July with a parade of floats, decorated vehicles, etc., followed by patriotic exercises, athletic games, band concert, and fire-works; gave illustrated lectures and musical entertainments of high rank; provided another men's banquet; and encouraged scholarship among private, grammar, and high school pupils.

All this, mind you, in a year and in a community of 225 families, of whom less than twenty-five have any prospect of being able to hold their land in their own hands for more than twenty-five years — in other words, in spite of economic change and shifting population.

Is it the personality or the point of view? The minister or the method? Doubtless the personality and the man contribute much, but the knowledge that men of strong personality in fields less difficult are failing, and that others are succeeding in spite of weak personalities, leads to the conclusion that the success of the country churches of this new type lies in the method and the point of view. The churches that are making good are churches that have an economic and a social viewpoint. They are rendering to their people a service that they need in their struggle for existence. You do not hear from their ministers sermons upon "what these people ought to do for this church;" their emphasis is upon "what this church ought to do for these people." They are losing themselves in their service to their communities. If the need is for better farming, the church tries to encourage it. Acting on the principle that the land is ultimately going into the hands of those who can produce most upon it, the church tries to make Christian farmers better farmers than non-Christians, so that the land will go into Christian hands and the community become a Christian community. For years the Steel Creek Church in Mecklenburg County, N. C., has seen to it that whenever a farmer in the community wishes to sell and to move out, one of its members gets his land. To hold it he must be or become a good farmer. This church now has a membership of 675. If the need is for recreation facilities, the new country church counts it a privilege to offer its plant and its grounds. If the need is for better roads, the church takes as its slogan, "I believe in better roads, and I purpose to have them." The new country church has realized that economic diseases need economic remedies, not theological, and that there can be no social or religious salvation until there is an economic salvation. It has championed the cause of the farmer.

THE STORY TELLERS' LEAGUE

REVIVING AN ART OLDER THAN LITERATURE — SEVENTY-FIVE LOCAL LEAGUES FROM BOSTON TO OMAHA

BY

RICHARD T. WYCHE

(PRESIDENT OF THE NATIONAL STORY TELLERS' LEAGUE)

ONCE upon a time about half a hundred people gathered on a lawn at twilight at the close of a summer's day, to tell stories, to sit on the grass, to relax, rest, and commune with those spiritual forces that lie dormant in literature and in nature until touched by living and creative personalities. We were a group of teachers attending the Summer School of the South at the University of Tennessee, during the summer of 1903. Twice a week these meetings were held with an informal

programme of stories and the singing of familiar national melodies. At the close of that session of the school a formal organization was made, which afterward became the National Story Tellers' League.

Since that time we have met for seven summers in Knoxville, at the same place, with increasing numbers; but not only that — similar meetings are held at the University of Virginia Summer School at Charlottesville, where the National League had its last annual meeting in July; at Oxford, O., and in many other summer schools throughout the land. But the largest side of the movement has been the forming of permanent local leagues, which meet during the larger part of the year.

The league at Nashville, Tenn., which was organized in 1907, meets at the Public Library twice a month. Its membership is composed of teachers, Sunday School workers, business and professional men and women. The President of the league has children of her own, and grandchildren, yet finds time and money for the league work and much pleasure in it. On the executive committee is a dentist, who was its organizer and first president; an editor of one of the leading daily papers of Nashville; the librarian of the Public Library; a Sunday School worker, and a teacher. The league coöperates with the librarian in furnishing story tellers for the story hour at the Public Library, which is largely attended by the children of the city; and in sending story tellers to settlements and to news-boys' club. Its membership numbers forty-seven.

Cincinnati was one of the first large cities to organize a league. The league was organized six years ago, and holds half a dozen meetings a year during the winter months. Last October, for example, the topic was "Norse Stories." The subject was presented by a paper on Norse literature, and was then followed by the children's librarians, who are members of the league, telling Norse stories. At the November meeting, an instructor from the University of Cincinnati gave a comprehensive talk about ballads and the stories in them. This was followed by members telling stories from ballads previously selected by the speaker of the meeting. Every year this league brings some prominent story teller from outside the city to present some special story or story work, charging an admission fee. Members of the league have organized leagues for teachers in Covington, Ky. and in Campbell County, Ky., while other members help in telling stories in the Public Library, play grounds, Sunday Schools, and other centres.

Adrian, Mich., for the present year devotes its time to fairy stories, folk-lore, and fables, especially the Norse. Most of its thirty-two members work for children in school or Sunday School. For several summers it has conducted a weekly out-of-door story hour for the children. They are agitating the question of public play grounds, and have already petitioned the city council to that end. The superintendent of schools says that he considers the league the finest organization for culture and mental development ever formed in the city, and the president of the league says that the organization has made the gentle art of story telling a joy and a delight.

The Knickerbocker Story Tellers' League of New York City, one of several circles in the city, last year devoted two meetings, with much pleasure and interest, to the telling of Homer's story of Ulysses from the Iliad and Odessy, one evening to Greek heroes, one to King Arthur, and two to Shakespeare stories. At the beginning of the present year, for several meetings, it retold the stories of Virgil's Æneid. It seeks to create among its members an appreciation of the world's great classic literature and through this to produce a higher appreciation of art in all phases of modern life.

New Orleans has recently launched a league with fifty-three members which meets at Tulane University. Its president, Miss Payne, is a kindergartener, and among its officers are Dr. Fortier of Tulane University, the city librarian, normal school instructors, grade teachers, and librarians. The league coöperates with the five library centres of the city in the story hour for the children, the city

play grounds, schools, and all organizations for child culture. One teacher has already organized a junior league among her pupils. A public meeting was held one evening in the Public Library, at which prominent people presented the league work.

The Chicago Story Tellers' League has as its president Miss Falkner, a kindergartener, who, some years ago, did such splendid work as a story teller to the children in settlements, play grounds, and parks of Chicago, that the children called her The Story Lady and she is known widely in Chautauqua circles by that name. The league issues a year-book and for the present year has on its programme Dr. Frank Gunsaulus, President of Armour Institute; Miss Elizabeth Harrison, Principal of Chicago Kindergarten College; Mrs. Thorne Thompsen and Mrs. MacClintock, of Chicago University — educators, authors, and story tellers of national fame. Several of its members are conducting classes, teaching story telling in various centres in the city; and the league itself has been a centre from which information and help have been sent out through the western section to all who are interested.

Little Rock, Ark., Omaha, Neb., and many other places too numerous to mention have story tellers' leagues. There are leagues in a number of state normal schools, in city high schools among the boys and girls, and even in the lower grades. Mrs. Jennie Hardy, of Blue Mountain, Miss., a charter member of the National League, caught the inspiration of this movement at our first twilight meeting, and since then has had an organization among her normal students and has organized leagues in the summer schools of the state. Mrs. John J. Cronan, another charter member, has done such splendid story telling work in Boston that the Boston Public Library system has employed her for the Story Hour in a number of its branch libraries. Miss Nannie Lee Frazier, of Louisville, Ky., has won national fame among the Sunday School teachers as a story teller and is an evangel of the story telling art to the Sunday School workers of America.

There are more than seventy-five local leagues, most of them loosely affiliated with the National League. Each league makes its own constitution and by-laws and determines its own line of work. So far, in the eight years of our existence, the work has been a labor of love, no member or officer receiving a salary. However, a number of the local leagues contribute a small fee to the central organization for a part of its expenses. The fundamental purpose of the whole movement is the told story, oral literature, with the young people always in view. In order that this work may be done effectively, we must study both human life and literature. As a child passes through all the periods of his growth, from the nursery rhyme through the heroic, romantic, and post adolescent periods, his interest and needs are different.

Coupled with this, we must have a knowledge of what the world's literature has of interest for our youth. We cannot tell one hundredth part of the good stories, to say nothing of others. What stories, from the standpoint of literature, are most worth knowing? He who sees, as Andrew Lang says, "The bright sun of Homer shining in the glad morning of the world," has a thousand pieces of literature and art that are reflections of this master story teller. Every nation has a great story, a national epic, whether it be Greece or Germany, that represents the accumulation of its best imaginings. To these we must turn as well as to history and life to-day for the best stories to tell.

Those who have been identified with the movement from the first have been exploring new regions. Slowly and patiently we have done the field and laboratory work and as we look toward the future in the practical application of our experiments we see immeasurably more than we saw at first. We are yet in our infancy. American thought is in a creative period. Old forms in education, art, religion, and government are assuming new forms to fit new conditions. The League movement is one with this growing life. In telling the old literature, we do it with a freshness and freedom that give it the breath of life, making it a living literature and a new expression of American life and art.

ADDISON BROADHURST, MASTER MERCHANT

CHAPTER III

A SHORT NOVEL OF BUSINESS SUCCESS

BY

EDWARD MOTT WOOLLEY

Addison Broadhurst,
Fifth Avenue Hotel,
New York City.

Springfellow & Company have a lawyer here and insist on immediate payment of our account. Attorney demands a full statement. Rush things as fast as possible in New York. We must have the money by to-morrow.

HIGGINS.

THIS was the message that stared up at me from the Western Union blank. Money, indeed! Where could we get any money? I had refused a charity gift, and there was no place to borrow any, unless I were to go to more of my friends and work the special partnership plan all over again. But if I did that, it must be a swindle! I had done it in good faith the other time, but now, after Lombard had laid me open, I could not do it except by fraud.

So I called up the railroad ticket office and engaged my berth back to Lost River. Then I sent this telegram to Higgins:

We are in wrong, and if we get out we must get out right. Lombard turns us down and any further attempt to raise money would be crooked. Our only course is to put the whole proposition squarely up to creditors. Home on fast train to-morrow morning.

BROADHURST.

These things done, I had six hours before train time. I spent the interval before dinner in walking about the retail and wholesale districts. In those days business New York was confined pretty well below Twenty-third Street. But now I fell to speculating on the probable growth of Manhattan. As I walked through Union Square I remembered that it was once a pauper graveyard, far from the business and home life of the city. I recalled that Madison Square was formerly a mere junction point of the old Boston and Bloomingdale roads. A little later, as I stood at the Bowling Green oval, a bit of its history came back to me. Here was once the very centre of New York's activities. Yet now it was on the southern fringe of the city.

I dined quite cheerfully in a little restaurant down on Maiden Lane, and was surprised to discover an appetite for a broiled steak with French-fried potatoes, topped off with apple-tapioca and coffee. And then I lit a cigar with something of my erstwhile assurance. A new purpose had sprung up within me and banished my discouragement.

After dinner I took a Broadway car and rode far northward to Central Park. Up one street and down another I strolled, still speculating on the time when this outlying district would afford a most extraordinary market. Ah, I was still under thirty! I could afford to wait. In twenty-five years I would still be in the prime of life. I was just on the borderland of opportunity.

In like manner there are men all over the Nation to-day who stand on the borders of success, yet perhaps are deep down in Bunyan's Slough of Despond — that boggy country we all traverse at times. There are a thousand cities and towns in the land that will multiply themselves time and again in the quarter-century to come, and the crowding of the markets will lift many a merchant to the highlands of endeavor. But the men who are thus

to climb out of the bog must look ahead patiently, and plan.

As the hour for my departure from New York drew closer I strolled toward the more settled districts, and, at the last, came into the street where Ruth Starrington lived. She was in Europe, but some impulse moved me to pass down the opposite side of the street and to pause a minute and gaze on the shadows within which lay her home. The house was utterly dark and bleak, and the sight of it filled me with a sudden revulsion from the exhilaration that had come over me since dinner. All my trials and problems swept back upon me, and the castles that had grown up in my brain were snuffed out.

Two days later the department store of Broadhurst & Higgins passed into the hands of a receiver.

The hounds had closed in on us — the whole pack of them. Springfellow had the lead; then came Switcher & Brothers; Armbruster, Son & Company were close behind; and trailing after the latter firm was John Dobbs, who was really the junior partner of his mother in a drygoods commission business. It seemed as if all the fathers and sons and brothers and mothers in the wholesale drygoods trade got after us. Then when Lost River got the tip, the avalanche of bills fairly covered us.

The things that happened during the succeeding days were gall. For instance, we heard from most of our twenty special partners. One of them, Michael O'Rourke of Lombard's, wired us: "Where do I get off?" Al Frisbie, another, was more brutal. "You are a couple of frauds," he wrote.

But there was a redeeming side to it. Charlie Moore— of Lombard's Toys, was a veritable prince to us. "I'll not give the thing a thought," he wrote. "Forget that I was a partner. But if you and Hig need a few hundred for personal expenses, on the q. t., wire me and I'll send down the currency by express."

We declined this generous offer. "I want no more debts," I told Higgins. "I'll never see daylight again."

That was the way it looked to me then. But you know that when a man finally gets on the right track he can often hew his way through a mountain of debt in an incredibly short time.

Well, when the store was opened for the grand closing-out sale there was the biggest crush of buyers ever seen in Lost River. Higgins and I stood by and watched the crowds ruefully. Surely, here was true irony of fate! For a week the rush continued. It seemed scarcely possible that all those people could be recruited from the Lost River selling zone.

"It's like going fishing," observed Higgins. "You may sit in a boat all day and not get a nibble, and when you come in at night you are ready to swear that there isn't a fish in the sea. But pretty soon you see a crew of professional fishermen coming in with their nets. Lo! They've got a whole boat-load."

Everything went, without reservation. The velvet ribbons that had long been stickers were cleaned out in a hurry. Silks, plushes, and flannels melted away. We had some French ginghams that we hadn't been able to sell at all, but somehow they vanished. Our failles, ottomans, and surahs all disappeared. It was the same with the white piques and batistes, with our tailor-mades, and with our evening coats that had dragged so badly. Even our expensive cluny and hand-embroidered centrepieces were snapped up, along with the Honiton laces and a big lot of embroideries.

It was the same with household furnishings, perfumery, door hinges, and picture frames. The appetite Lost River had for our stuff was amazing. But the stuff went for a song. Unless your business is really a going one, it isn't safe to count much on merchandise assets. There is no asset more unstable, once it begins to stand still. You've got to keep crowding goods off the shelves all the time, and crowding more goods on.

All this occupied a month or so. Higgins had been gone for some time, and I was living in a six-dollar bedroom at a modest boarding-house. On the day I packed my trunk to leave Lost River I didn't have money enough in my pocket to pay my fare to New York. The ultimate loss at the store was still problematical. It seemed likely that in time the receiver

might collect enough money to clear up most if not all the debts, and perhaps pay off part of the special partnership funds. But, with the heavy legal expenses and the costs of closing out the business, the prospects even for this were dubious.

On the evening preceding my departure I went to my room and got together some of my neckwear, shirts, and fancy hosiery. Across the hall a couple of bank clerks roomed, and I stepped to their door and called them to my diminutive quarters.

"I've got a lot of stuff here that I don't want to be bothered with," I said. "Rather than lug it back to New York, I'll sell it at auction."

The stuff was worth twenty-five dollars, but I sold it for four dollars and eighty cents, and thus raised money enough to make up my deficiency on transportation.

The next evening Higgins met me at the ferry in New York and, arm in arm, we walked over to Greenwich Street and took a car to his quarters up near Chelsea Square. He was still idle, but was expecting to land a job soon, as buyer for a silk-importing house. He might have gone back to Lombard's but he couldn't choke down his pride.

"I'll never go back there, Broady," he declared, "never in a thousand years!"

"Nor I, Hig!" I assured him. "New York is big, and I mean to show Lombard that I'm not a mere hanger-on."

I was firmly resolved, from the very day I returned to New York, to go into business again. The spirit of overcoming obstacles took hold of me firmly. But the immediate problem was getting a job.

I was out of work for only a week. Then I landed as superintendent of floorwalkers in a Broadway store. This place paid me only thirty dollars a week, but I got a little room in a cheap boarding-house just off Seventh Avenue and adjusted my scale of living accordingly. I was considerably behind on my sister's school expenses, and for two or three months I was able to save nothing toward my new business capital. My sister Jean was now quite a young lady and I was giving her a course in millinery designing. In a short time she would be self-supporting.

Along in the middle of the summer a most unexpected thing happened. I received a note from Joel Langenbeck, head of Langenbeck Brothers' wholesale house, asking me to call at his office that afternoon at three.

I found him there at the appointed time, and introduced myself, for I had never met him. He looked me over keenly.

"I've heard of you, on and off, for a long time," he said, as he motioned me to a chair. "That was a bad mess you made of it down at Lost River, Broadhurst. There's been something wrong with your education over at Lombard & Hapgood's, or such a thing couldn't happen. Lombard is a fine man and in some ways a splendid merchant, but he runs that whole business himself — he's the chief engineer, train-master, and road superintendent of locomotives. If Lombard were to drop off suddenly, the business would go to the wall in a year.

"Now here in my own business I lay great stress on my organization. I want big, broad fellows, not men with arrested mental development. In my establishment to-day I have at least half a dozen men who could take this concern and go on with it, should anything happen to me. I make it my business to get men with inherent capacity, and then I train them. I pay them what they are worth to me — I'm not afraid of an extra thousand or two above the usual salaries. Every now and then one of my men gets too big for a salaried job and strikes out for himself; but I don't complain. That's the sort of men I want here, Broadhurst — men who have an ambition to get into business, and who have the ability."

He turned in his chair so as to face me squarely. "How would you like to work for me?" he inquired. "I've been watching you, and I think you're the sort I want. I liked your nerve in starting a department store down at Lost River, though I refused you credit. It wasn't because I doubted your honesty or that of your partner, but because I knew you didn't understand what you were up against. I felt sure you'd be back here in New York, and I made up my mind I'd keep an eye on you and give you a show. I can start

you at twenty-five hundred, as assistant manager of our traveling men."

I accepted the place on the spot.

However, I began at the same time to dissect New York on my own account. I spent most of my spare hours analyzing my opportunity. My evenings and part of my Sundays were devoted to exploring New York and to reducing the markets of its different sections to figures. The thing that interested me most at the start was the problem of finding a location. Just what kind of goods I should sell the future must determine.

I don't mean to take you through all this laborious process with me, but I want to give you a glimpse of the finish. After I had tramped most of the streets as far as the Harlem River, and made endless tabulations, I came back to a local centre which I shall designate as Junction Square.

Now I took a map of New York and drew a circle embracing an area of twenty blocks' diameter, with the Square as the centre. There were no directories that would give me information concerning the population of this particular area, so the following Sunday I spent the afternoon in personal inspection of a number of streets. I counted the houses, made a careful record of their types, and observed in a critical manner the people themselves.

To go over the whole area in this way required many weeks, but from the data thus secured I calculated the approximate population in my chosen zone, and divided it into classes.

I was somewhat disappointed in the total number of people who lived in this territory — something like twenty thousand — but I was not laying my plans for the present alone. I was certain that retail trade must grow toward me along several streets which converged at the Junction. It was here the currents must meet. If I could assume that New York would grow at all, then I'd be safe in taking a ten-year lease, if I chose — or, in fact, a twenty-year lease.

Over in one segment of my district the circle included quite a lot of aristocratic homes, but I deducted this class altogether from my reckonings. This left the great bulk of my prospective markets composed of people a grade or two below the middle classes — close buyers, of small incomes.

But I was not satisfied; I resolved on a still closer analysis. I instituted a sociological study of the people in this part of New York. I made the acquaintance of local merchants, policemen, firemen, janitors of apartment-buildings, and of the householders themselves wherever I could. I was enabled to get glimpses of typical homes from the inside, and of the churches, schools, and places of entertainment.

You see, I did just what Lombard had advised: got down to the level of the population to whom I hoped to sell goods.

As I dictate, I have before me some of the notes I took during my researches. I have long lists of household furnishings — gathered, like an artist's sketches, from life. I have similar lists of clothing, of crockery, trunks, books, stationery, and the like. Whenever I discovered any essential fact or prevailing taste, I multiplied it by the number of people involved with it, and thus got a total. For example, I was able to estimate the number and average cost of the hats worn by girls of sixteen or thereabouts. I could tell, likewise, about what the average family was willing to expend for kitchen utensils, toys— or novelties.

One night I took my data over to Higgins's bachelor quarters on West Nineteenth Street. "What kind of business shall I start?" I asked.

He studied my papers for an hour.

"Well?" I queried, anxiously, as he paused in reflection. "Well, what's your verdict?"

"It's as plain as daylight," Higgins answered. "You'll sell general merchandise, of course — of the cheaper varieties."

"Broadhurst," said Joel Langenbeck, as I took a chair beside his desk in response to a summons one day, ten months after my return from Lost River — "Broadhurst, how soon can you pack up your duds and leave town?"

"The packing would not take me long," I said. "I am not burdened with chattels, and my other affairs need not detain me. How long am I to be absent?"

He detected the note in my voice, for he laughed. "That girl of yours must be considered, I suppose," he hinted. "A year's absence would be rather tough. Suppose we say that you'll be away six months, and then home for a month, and then away for six months again? Besides, Miss Starrington is likely to be abroad herself during the year, and you'll have a chance to see her over there. I should dislike interfering with your plans in that respect, Broadhurst. She's a fine girl! Luck to you!

"I saw you two at the show the other night," he explained. "You couldn't do better, Broadhurst. I like to see my boys make suitable alliances. I believe in marriage, and you are old enough to quit your bachelor life. Besides, if you don't get her pretty soon, some other chap will. And see here, Broadhurst, I am going to make it possible for you to marry and live respectably — for a young couple starting out. How would sixty-five hundred dollars a year strike you as a salary? A very decent title will go with it, too — Foreign Manager."

Now I have no inclination to drag any merely personal affairs into this narrative, but I must relate in a paragraph or two the incidents bearing on my renewed acquaintance with the young lady to whom Langenbeck had referred.

The fact of the matter was this: I had divorced business from affairs of the heart. In the plans I was slowly forming, neither Miss Starrington nor any other girl had a part. By this I mean that my judgment — built by degrees out of my somewhat tedious analysis of markets — was no longer tinged with the colors of romance. In my business planning, I was an economist pure and simple, as direct as John Stuart Mill and as philosophical as Aristotle or Plato.

In my personal life, on the other hand, I was Addison Broadhurst; and, as such, I called one evening at the Starrington home, made a clean breast of my commercial shortcomings, and then forgot — with much effort, I confess — that I had ever been in business or ever hoped to be. In secret I made up my mind that if the girl showed me favor as Addison Broadhurst I should call again; but if she appeared to regard me as Addison Broadhurst, Superintendent of Traveling Men, or as Addison Broadhurst, Bankrupt Merchant, then I'd never go back.

I went back — time and again. That's about all I need to say now.

But I must acknowledge that Langenbeck's sudden move in ordering me abroad quite upset my economics. I had to confess to myself that however much of a business machine a man resolves to make of himself, he is still a man.

I was in the position of one who has made up his mind to pursue a definite ambition yet finds himself sorely tempted to abandon all his aims in order to follow a glittering light that beckons him out of his course. I had been firmly resolved to go into business, and on that purpose I had undertaken exhaustive research and laid out detailed specifications. Yet here was Langenbeck calmly luring me away with a salary of sixty-five hundred, with an attractive position, and with his advice that I marry Miss Starrington!

It is always one of the difficult things in life to follow a purpose. Millions of men, I am sure, have come out into old age as failures because they fell victims to diverting allurements. I regret to confess that I fell before the temptation placed in my way by Joel Langenbeck, and took the job as Foreign Manager for Langenbeck Brothers. I had planned to go into business in the spring, but I gave it up.

I called at Ruth Starrington's home that evening to tell her of my unexpected transfer to foreign lands, and to say that I should surely see her as much as possible in Europe. I knew she was going abroad in a month or two, for the summer. I discovered, however, that she and her mother had gone to Virginia for a few weeks — they were Virginians by birth. Therefore, I could only leave a note of farewell.

When I sailed away from New York next day on the old liner *City of Rome*, I confess that I felt something like a deserter. I had made an exhaustive analysis of my New York opportunity, and was so sure of the field that lay before me there in Manhattan, that to go away like this, in

pursuit of a minor purpose — now seemed pure cowardice.

I remember how the old-time skyline of the metropolis faded away as the ship steamed down the Bay toward the Narrows. The spire of Trinity, if I recollect aright, was the highest of them all, except perhaps the dome of the World Building. I have forgotten as to that. At any rate, I stood and watched the picture recede, and knew full well that I was running away from my chance. I was taking the easy course, drifting along pleasantly with an agreeable current, but leaving behind me the really big purpose that had fired every nerve for many months.

For the present let me skip the things that happened in Europe — things of immense importance to me, nevertheless — and jump ahead a few months. On the first day of May I sailed into New York harbor again on the same *City of Rome*. Something had changed all my plans again and sent me back to my battlefield, ready to get a stronger grip on my big purpose.

I had come back a free agent, no longer connected with the house of Langenbeck Brothers. My first act of consequence after landing was to lease, for ten years, a store at Junction Square. My store had a frontage of only twenty feet and a depth of sixty.

Moreover, it was a store that had neither silks nor umbrellas with ornamental handles, nor could you have found anywhere in the establishment a white ostrich plume and maribou with lace effects; nor a smart jabot such as we stocked down at Lost River; nor any rose and gold brocades in glass model cases. It was a store devoted exclusively to general merchandise of the cheap variety. The cost of my initial stock was twelve hundred dollars. My actual available cash, however, was seventeen hundred dollars, which represented my savings since the failure of Broadhurst & Higgins. The receiver for that erstwhile firm had closed his task and discharged all the debts except a balance of fifty-five hundred dollars due our special partners. For this indebtedness Higgins and I gave our personal notes, payable in instalments.

On the day I started, Higgins came up to see my grand opening, as he called it, with a laugh. There was a little emotion on my part as well as his. We both recalled vividly the day of our grand opening in Lost River, and the hopes we both cherished on that occasion.

"But I don't see any festoons of gilded leaves here," he observed, with a smile, as he glanced toward the ceiling of my tiny establishment; "and you've forgotten the potted plants and canary birds, Broadhurst."

"I needed the space for goods," I said.

Then I showed him the special systems I had installed for transferring the people's money from their pockets to my coffers. "When a man or woman comes in here with cash," said I, "it is my intention to get it quickly. I have the machinery here for that purpose. I'll have nobody going away with a tale of woe about our poor service. Not long ago I went into a store down the street, intent on spending five dollars for a pair of shoes. The chief clerk received me most genially and invited me to be seated. Then he brought me the morning *Sun* and a joke paper, and told me to make myself quite at home — a clerk would be at liberty presently. But I had already perused the day's news, and reading joke papers was not part of my routine during business hours. I spent ten minutes at it, and then took it back to the affable gentleman at the door. 'Good day,' said I, 'thank you very much for the entertainment,' and out I walked with my five dollar bill in my pocket."

Higgins laughed. "The art of separating customers from their cash, for value received, is one that most merchants understand only feebly," he said. "The advertising men lie awake nights thinking up schemes to attract circulating medium, but when it comes it often circulates through the store and out the side door before anybody nabs it. The proprietor is busy thinking up fresh advertising schemes, and hasn't any time to discover the leakage from people who can't wait."

"Leakage of that sort," I returned, "seems to me largely inexcusable. There is something wrong with a store when a customer must fret and fume, and flourish

his dollars in the air, and finally get a club and crack some clerk over the head before he can get rid of his burdensome currency. If any of my clerks need a club, Higgins, I'll be the one to use it on them — not my customers."

And then I showed him some calculations I had made concerning the efficiency of clerks. I had gathered a lot of statistics from retail stores showing that the average clerk sold less than twenty-five dollars' worth of goods a day, and that the average net profit to the store on every clerk's sales was less than a dollar and fifteen cents.

This, in fact, was a most extraordinary showing — a stupendous contribution to the literature of selling inefficiency. Many a clerk, even to-day, is receiving more in his pay envelope on Saturday night than he has earned for his employer during the week. And more likely than not his boss doesn't know it, but imagines the clerk to be a very good sort of fellow, doing the best he can. When the store goes to smash the advertising man gets roasted.

There is a way to find out what the clerks are doing — a way to find out most of these things; but I can't take up here the detailed arithmetic of selling.

I escorted Higgins about my diminutive domain and showed him how I had planned to cut off the corners of retail salesmanship. True, we had done pretty much the same thing at Lost River, but down there, you know, other things had proved our undoing. In a way, merchandising is something like the practice of medicine. The head of a business is likely to run against a snag if he allows himself to become a faddist, just as a doctor will kill off half his best-paying patients if he makes himself too much of a specialist.

A business man, I repeat, must not depend on a few narrow systems and imagine he has a model store. He must start with a broad philosophy that covers the store's whole anatomy, and then build every system as a subsidiary, and not as a detached scheme. I know of one largely unsuccessful store in particular that stands to-day as a striking example of this one-sided vision. It employs a magnificent gentleman to stand just inside its main portal and to give the glad-hand to all incoming customers. He is one of the most courtly men I ever saw, suave as a diplomat. He passes the customers along with kingly favor — and then, back at the counter, the customer has to take a jimmy and get the cash-drawer open so he can drop in his contribution. Having done this, he waits ten or twenty minutes for his change. If he gets tired before he lets go of his cash, the magnificent gentleman never sees him as he walks out.

"I tell you, Higgins," said I— as he was leaving my store that first day—"politeness is a good specialty in business, but it ought to be combined with store engineering. It is better not to smile quite so much and to hustle more. It is more profitable to have swiftly moving systems for handling customers and sending them away with smiles on their own faces and less money in their pockets."

Yet with all my care and planning, I had overlooked something that soon got me into hot water.

(*To be continued*)

THE MARCH OF THE CITIES

CHICAGO'S FRIENDLY ADVANCE UPON SOUTH AMERICA — A TRADE EMBASSY AT BUENOS AIRES

THE great Chicago Association of Commerce, representing 4,000 business houses and approximately 10,000 men, two years ago established at Buenos Aires a South American office, to extend American trade. A few weeks ago the experimental period — two years — was over; and so satisfactory have been the results that the association, after critically reviewing what had been accomplished, has made the Buenos Aires office a permanent department of its work for trade extension.

South America was chosen as a field, and Buenos Aires as the centre of operations, because the Chicago men, after a careful study of the whole world, found that of all the countries yet to be invaded by the American exporter none possesses so high a type of citizenship, so enlightened a consuming public, and so great a purchasing power as the countries of South America. These countries, rich in agricultural and natural wealth, depend almost entirely upon foreign commercial nations for products of manufacture, a condition which will probably continue permanently because of their lack of coal deposits and other sources of power. Hitherto England and Germany have had the lion's share of this rich trade. The citizens of Buenos Aires purchase annually goods valued at $16 gold from England, $10 from Germany, and $7 from this country per capita. American goods in general, and Chicago goods in particular, were little seen in South American markets. In spite of the efficient work of the organized Consular Service, no adequate move had been made to give American goods a proper chance in this territory until these business men stole a march on the commercial world and established their trade embassy.

In Chicago, in nearby towns, and in neighboring states of the Middle West, is growing up a manufacturing district so large that it must look to the world for adequate markets. That field lies open in South America. Machinery, tools, men's furnishings, and women's apparel are needed by these countries and these things the Chicago district produces.

The trade ambassador at Buenos Aires was sent to "introduce Chicago." He was not permitted to take orders for anything; he was to place South American business men in connection with the Chicago firms with which they might do business. His field of operation is the whole southern continent. He visits every important city several times annually, and his gospel is "American goods in general, but Chicago goods first of all." The business that has come to Chicago from this experiment has fully justified the annual expense of $15,000 of maintaining the office, and has caused the association to open as an adjunct to the office a permanent exposition of Chicago goods. These goods will not be offered for sale directly by the association's representative. They will be maintained there to demonstrate to the consuming public of Argentina, and of other countries of which Buenos Aires is the commercial Mecca, the character of Chicago-made goods.

Chicago is not only the first city to establish a trade embassy in a foreign country; it is the only city that is making an extensive, organized effort to win for America a larger share of the trade that lies south of the equator. When other manufacturing centres wake up to the opportunities in South America they will find Chicago already established in the field and doing business, thanks to its Association of Commerce.

FORWARD TO THE LAND

RAISING THE SELLING EFFICIENCY OF THE FARM

THIS is the story of a group of discouraged farmers who applied factory and mercantile methods to their work — who made farming a business — and succeeded greatly. They have organized like the steel trust and have advertised like the kodak manufacturers; and they have found that it pays.

Twenty years ago the citrus fruit industry of California was unorganized and demoralized — and unprofitable to the growers. The railroads made money from it, by charging high tariffs for slow and careless service. The commission men, in Chicago and New York, made money by exacting extortionate commissions and often by downright fraud and larceny.

The growers were in California and the markets were two and three thousand miles away; and, once the fruit left a grower's ranch, he had to take other folks' word for it that his perishable product had "spoiled in transit." As often as not, instead of a check for his crop, he got bills for services from his commission agent and from the railroad.

Some of the growers, in desperation, formed a coöperative packing and selling company. They established their own packing houses, in which their fruit could be inspected and graded and packed by their friends instead of their enemies, as the commission merchants had proved to be. Then they formed their own selling organization. Men of their own choice, dependent on their loyalty to the growers for their jobs and drawing salaries for their undivided attention to the growers' interests, were sent to the big fruit markets of the country to sell the fruit. These men kept the central office in Los Angeles informed daily of the market conditions in their territory. Thus the officers were able to send fruit to those parts of the country in which the stock was low and the price high, and to stop shipments to markets that were already glutted. And the growers' agents constantly widened the then limited market for citrus fruits.

The results have been astonishing. The cost of packing has been reduced from 40 and 50 cents a box to 30 cents a box. The cost of selling has been reduced from 7 and 10 per cent. of the gross proceeds to 3 per cent. for an infinitely better service. The market has been widened from a "fancy" trade in a few big cities to a popular trade radiating through more than 1,500 jobbers in more than 600 cities. A year-round sale is now secured by extensive advertising at a cost of about $200,000 a year, paid for by a levy of about a cent a box on the growers, who believe heartily in advertising.

And these mere farmers, because they were organized, as the great manufacturers are organized, have got the tariff on citrus fruits raised from 20 cents a box to 65 cents a box on imported oranges and to $1 a box on imported lemons.

The California Fruit Growers' Exchange, which has done this thing, now represents about 100 local coöperative exchanges, or about 6,000 growers, whose investment in land and improvements is about $175,000,000 and who annually produce about 50,000 carloads of fruit that yield them about $30,000,000 a year.

The Exchange neither buys nor sells fruit. It picks most of the crop for its members, and it keeps its members supplied with the latest authentic market information. The members sell their own fruit, through the Exchange.

The California Fruit Growers' Exchange is the central organization of which the local associations are the units. The citrus districts of California are not all contiguous, and this and other peculiarities determine the natural boundaries of these associations. The growers pledge their fruit to their local association. The associations, in turn, combine into district exchanges which represent them in the central exchange and which coöperate with the central exchange in the distribution and sale of the fruit. The central exchange maintains the selling agents in the Eastern markets, supervises the shipping of fruit to those markets, and collects the money and transmits it to the district exchanges which pay the growers through its component associations.

The Exchange now handles 60 per cent. of the citrus crop of California, and other coöperative associations that are modeled after it handle about 25 per cent.

The success of the coöperative principle has led the growers to form a supply company, with a capital of $1,000,000, through which they buy orchard supplies, such as fertilizer, etc. The packing-houses, which are valued at about $2,000,000, are also owned in common and are run as coöperative enterprises.

The California Fruit Growers' Exchange is one answer to the problem of the farmer who is looking for a larger share of the proceeds of his industry. Its efficiency is about 90 per cent., compared with the average farm selling-efficiency of less than 50 per cent. This is the result of organization and business methods applied to farming. Any other group of farmers can achieve the same freedom and profit by like methods.

ANSWERS TO QUESTIONS ABOUT FARM LANDS

71.—*Q.* We own 200 acres of Michigan timber land — clay and sandy loam, with poor buildings — worth $80 an acre. Could we buy a good farm in the East, with good buildings, at a sufficient saving to warrant the change? Would prices for produce rule higher there?

A. Farms with livable buildings may be bought in New York, New England, and states farther south for as little as $20 an acre. Of course, highly improved land or bearing orchards create considerably higher values, but for $50 an acre you can find well equipped farms with land that will produce profitable yields of any of the north temperate crops. Some are run down, some may be in poor neighborhoods, and, of course, the percentage of improved land is smaller than in the corn and wheat belts. However, with nearer markets, many miles of good roads, excellent school and social facilities, and, in several instances, higher prices for produce than farther west, many eastern farms are excellent bargains. A careful search should precede a purchase anywhere.

72.—*Q.* I wish to make a home in the Imperial Valley of California. How about climate, rainfall, crops, etc?

A. For detailed answers write for Bulletin 237, Office of Experiment Stations, Washington, D. C.; the Soil Survey of the Imperial Area, California, 1903, Bureau of Soils, Washington, D. C.; Bulletin 21, Agricultural Experiment Station, Berkeley, Cal.; and for general descriptive literature to the nearest office of the Southern Pacific Railroad.

The Valley, about 270 feet below sea level, is characterized by extreme aridity, and exceptionally high summer temperatures. In an average year there are only six rainy days, the average annual temperature being 77 degrees. Under irrigation, which is controlled practically by one large private enterprise, a variety of products can be raised. Such irrigated land as is for sale is high-priced. Other land can be homesteaded, but water for it is often not available for some time after its entry. We suggest a temporary sojourn there before a permanent settlement is made.

73.—*Q.* I am an engineer with $2,000 that I want to invest in a farm, if I can make a living at the business. I hear of no cheap land except in Canada, but I fear the climate there. Do you think there is any chance for me and where?

A. Inexperienced men with less than $2,000 have succeeded on farms through study, observation, hard work, and unlimited energy. Can you supply all these qualifications?

There certainly is land in the United States as good and as cheap as any in Canada. Look in the Ozark section of Missouri and Arkansas, in eastern Texas, Kentucky, Virginia, North and South Carolina, and Georgia. In nearly all these localities buildings are of secondary importance and productive land can be bought for from $10 to $40 an acre. Of course, getting started is ordinarily expensive, so that if you could get work on a good farm in some such section you would gain experience and familiarity with the country and with farm conditions at the same time. Find out what farming really is before you put all your money in it.

74.—*Q.* I am pastor of a church in a New York community of discouraged farmers and abandoned farms. Men concentrate their efforts on milk production and feed western grain at enormous expense. I want to teach them how to improve their stock and their farms, and better the neighborhood. How can I do it? Can libraries be obtained, and lecturers or at least lantern slides and lecture texts?

A. Farmers are often unwilling learners unless their teacher proves, by his own success, the value of his advice. One of the most effective things you could do would be to get one or two up-to-date, progressive, broad-minded, scientific farmers to locate in your section. They would stimulate better farming both by competition and example.

Your real task is to create a new public sentiment. This may be done, as it has been done before, through several agencies. The nucleus may be a school, a church, the grange, or any organization of men, women, or children. Local farm bureaus have proved successful in several New York counties. Possibly their agents at Binghamton, Utica, and Watertown may be able to suggest ways and means. The Office of Farm Management of the United States Deparment of Agriculture at Washington, D. C., will coöperate in devising a system of more profitable farming. The State College of Agriculture at Ithaca and the State Supervisor of Institutes at Albany may be able to provide lecturers or lecture material. The state librarian, also at Albany, can advise you about traveling free libraries.

The World's Work

WALTER H. PAGE, Editor

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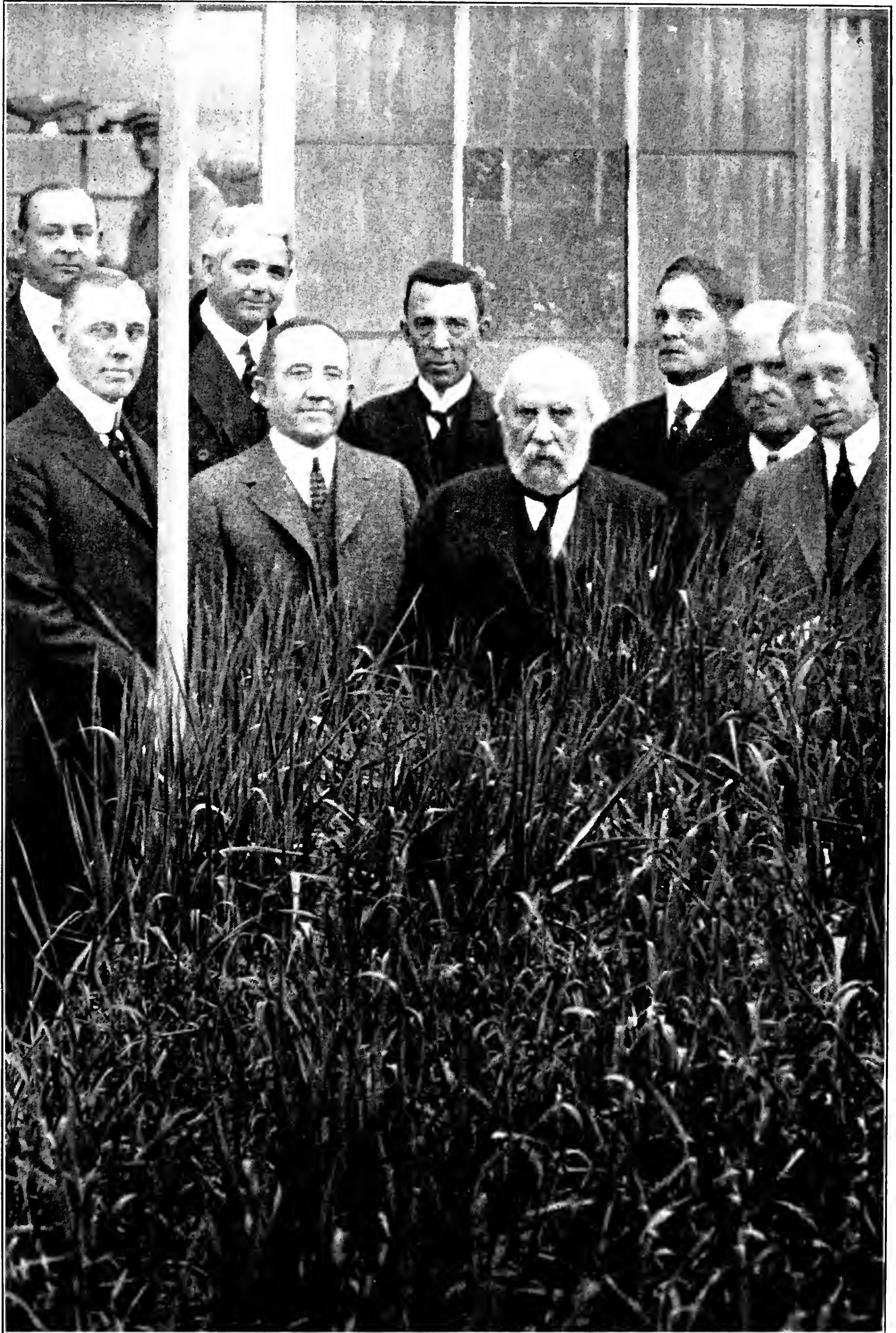

MR. JAMES J. HILL

INSPECTING THE EXPERIMENTAL GROWTHS IN HIS GREENHOUSES BY WHICH SOILS FROM ALL PARTS OF THE NORTHWEST HAVE BEEN TESTED AND PRESCRIBED FOR, SO THAT THE FARMERS OF THE NORTHWEST CAN INCREASE THEIR YIELDS FROM 50 TO 90 PER CENT.

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APRIL, 1913

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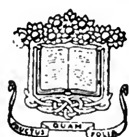

NUMBER 6

THE MARCH OF EVENTS

PRESIDENT WILSON'S Cabinet is, as a whole, wisely chosen. It is not a spectacular Cabinet, but it promises to be a good working body of men. It has men in it who were chosen for fitness for their tasks. It has men in it who were chosen for political reasons. It has men in it who presumably were chosen primarily as counselors to their chief. These different uses call for several different kinds of men.

Mr. McAdoo is an eminently safe Secretary of the Treasury. Mr. Lane gives every promise of a successful and sound Secretary of the Interior, being originally a Western man and a man of right views on conservation and a "progressive" Democrat. Mr. Houston is one of our very best economists, a successful organizer and a man of vigor, whose appointment is perhaps the fittest of all. He is an able adviser in the work of improving the condition thus described in President Wilson's inaugural: "A body of agricultural activities never yet given the efficiency of great business undertakings or served as it should be through the instrumentality of science taken directly to the farm, or afforded the facilities of credit best suited to its practical needs." Mr. McReynolds won the Attorney-General's portfolio by his prosecution of the American Tobacco Company, and his appointment gives a clue to the thought and purpose of the new Administration. Mr. Garrison's judicial experience has been a preparation for the large duties that now fall to the Secretary of War, notably in the Philippines and in the Panama Zone. Mr. Redfield is a successful man of business whose grasp on commercial subjects ought to be firm and safe.

When we come to the three political appointments — well, they are political. Their choice is legitimate — provided the Departments entrusted to these gentlemen do not suffer. The State portfolio the President must himself hold whenever important foreign questions come up. The Cabinet will help the President to hold his party together and make it a working instrument for carrying his own ideas into effect. It is always to be remembered that on matters of large policy Mr. Wilson will be his own Cabinet; and in matters small and great at least a majority of his official family seem well chosen and wise counselors. But time, of course, is the only test of such a combination of working forces.

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MR. WILLIAM JENNINGS BRYAN

SECRETARY OF STATE, WHO IS IMMEDIATELY CONFRONTED WITH THE DIFFICULT MEXICAN SITUATION AND THE NEGOTIATIONS WITH GREAT BRITAIN OVER THE PANAMA CANAL TOLLS, AND WHOSE MORE LASTING CONSTRUCTIVE TASKS ARE THE CONTINUED IMPROVEMENT OF OUR RELATIONS WITH THE CENTRAL AND SOUTH AMERICAN COUNTRIES, THE CONTINUED IMPROVEMENT IN OUR CONSULAR AND DIPLOMATIC SERVICE, THE ESTABLISHMENT OF CLOSER TRADE RELATIONS WITH SOUTH AMERICA, AND THE DEFINITION OF OUR COMMERCIAL RIGHTS IN CHINA

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SECRETARY OF THE TREASURY, UNDER WHOSE EXECUTIVE DIRECTION MUST BE WORKED OUT A NEW FISCAL POLICY WHICH WILL BE NECESSARY UNDER THE READJUSTMENTS OF FEDERAL REVENUES THAT WILL ARISE FROM THE FORTHCOMING REVISION OF THE TARIFF SCHEDULES AND FROM THE ENFORCEMENT OF THE LAWS UNDER THE NEW INCOME TAX AMENDMENT TO THE CONSTITUTION AND OF OTHER LAWS THAT PROBABLY WILL BE PASSED BY CONGRESS TO CORRECT THE PRESENT INEFFICIENT CURRENCY SYSTEM

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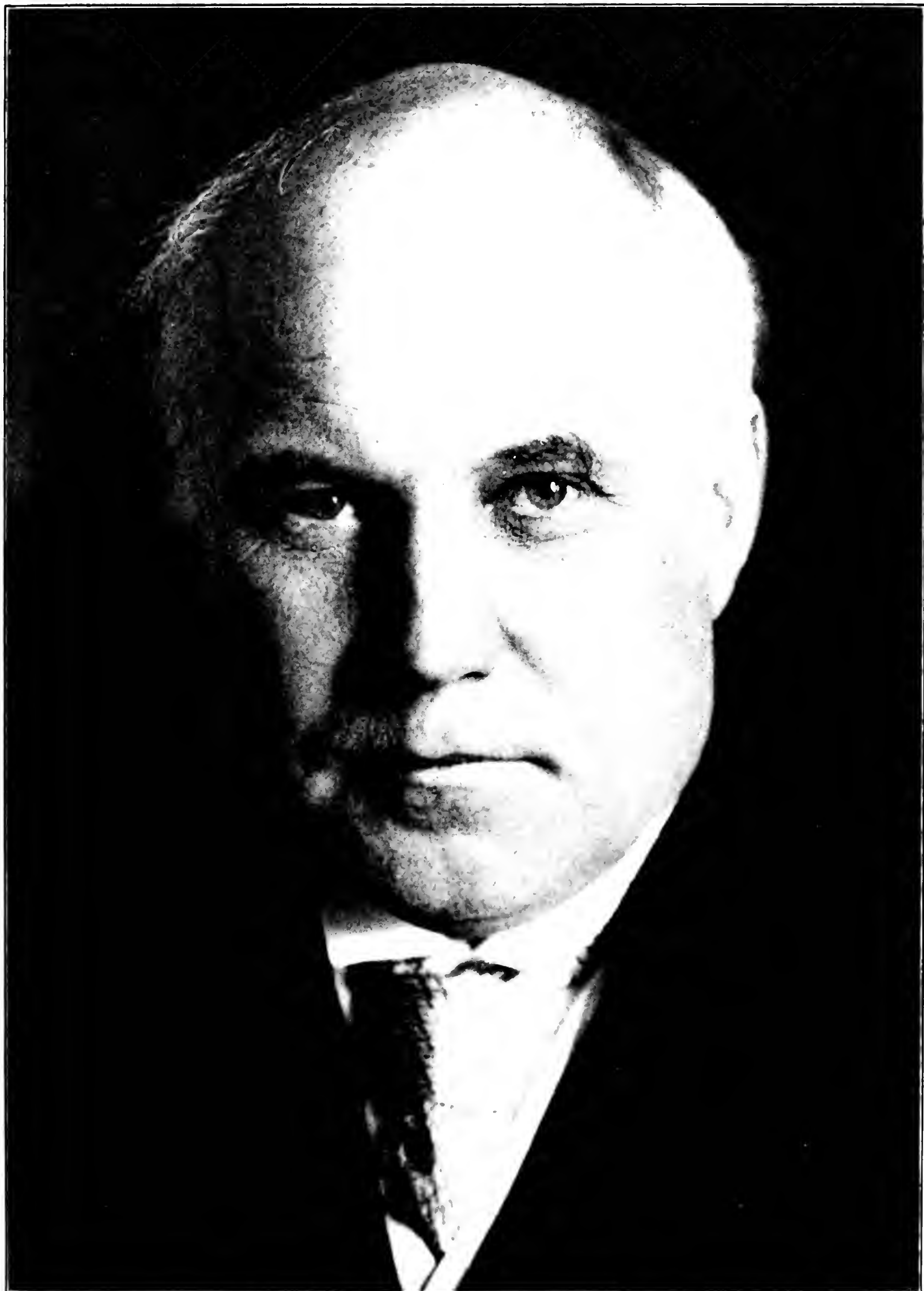
SECRETARY OF COMMERCE, WHO BY HIS POLICY IN INVESTIGATING CORPORATE ACTIVITIES AND IN EXECUTING THAT PORTION OF THE CORPORATION LAWS THE ENFORCEMENT OF WHICH IS ENTRUSTED TO HIS DEPARTMENT, WILL LARGELY AFFECT THE SOLUTION OF THE "TRUST PROBLEM," AND WHO, AS THE EXECUTIVE OFFICER OF LAST RESORT IN IMMIGRATION APPEALS, HAS IT IN HIS POWER SO TO INTERPRET THE LAW IN INDIVIDUAL CASES THAT HE CAN PRACTICALLY DETERMINE THE QUALITY AND TO A CONSIDERABLE DEGREE THE NUMBER OF FOREIGNERS WHO MAY ENTER THE UNITED STATES AND ENJOY ITS RIGHTS OF CITIZENSHIP



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SECRETARY OF THE INTERIOR, IN WHOSE HANDS LIES THE FURTHER PROGRESS OF CONSERVATION, FOR THE RECLAMATION SERVICE WITH ITS ENGINEERING WORKS RIVALLING THE PANAMA CANAL IN SIZE, THE LAND OFFICE WITH ITS 700,000,000 ACRES OF LAND, THE GEOLOGICAL SURVEY, AND THE BUREAU OF MINES ARE IN HIS DEPARTMENT, AS IS ALSO THE PENSION OFFICE WITH AN EXPENDITURE WHICH THIS YEAR REACHED $180,000,000

MR. DAVID FRANKLIN HOUSTON

SECRETARY OF AGRICULTURE, UPON WHOM RESTS THE FUNCTIONS OF FURTHERING THE CONSERVATION OF AMERICAN FORESTS, THE EXTENSION OF KNOWLEDGE OF SCIENTIFIC FARM PRACTICE THROUGH FARM DEMONSTRATION WORK AND SIMILAR ACTIVITIES, THE INTRODUCTION AND DEVELOPMENT OF NEW PLANTS FROM FOREIGN LANDS, THE APPLICATION OF COÖPERATIVE PRINCIPLES TO THE FINANCING OF FARM OPERATIONS AND TO THE MARKETING OF FARM PRODUCTS, AND THE ENLARGEMENT OF THE BODY OF INFORMATION UPON THE NATURE AND TREATMENT OF SOILS

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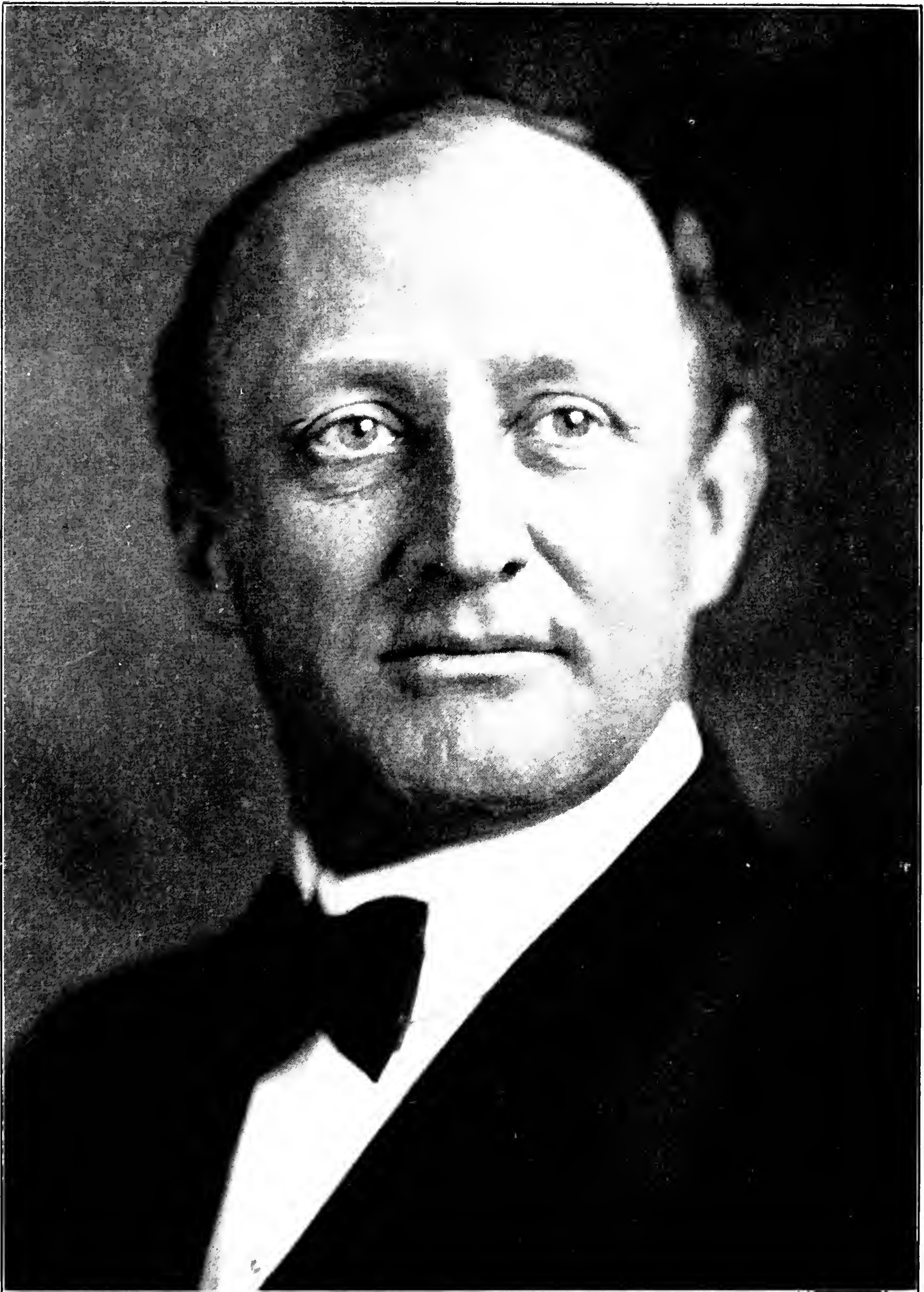
SECRETARY OF LABOR, WHO HAS POWER LARGELY TO SHAPE THE POLICY AND TO DETERMINE THE USEFULNESS OF THE NEW DEPARTMENT OF WHICH HE IS THE FIRST HEAD, IN THE PREVENTION OF COSTLY STRIKES AND IN THE PEACEFUL SETTLEMENT OF INDUSTRIAL DISPUTES BETWEEN EMPLOYERS AND EMPLOYEES



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ATTORNEY-GENERAL, UPON WHOSE ACTIVITY AND EFFICIENCY RESTS THE ENFORCEMENT OF THE SHERMAN LAW AND OF THOSE SUPPLEMENTARY LAWS WHICH CONGRESS WILL PROBABLY ENACT, UPON THE RECOMMENDATION OF THE PRESIDENT, TO DESTROY MONOPOLY AND RESTORE COMPETITION IN AMERICAN INDUSTRY

MR. LINDLEY M. GARRISON

SECRETARY OF WAR, WHOSE ESSENTIAL IMMEDIATE TASK IN CONTINENTAL UNITED STATES IS TO AID IN THE RE-ARRANGEMENT OF ARMY POSTS SO THAT THEY SHALL BE PLACED IN RELATION TO THEIR USEFULNESS FOR POLICE DUTY IN TIME OF PEACE AND TO THEIR EFFICIENCY AS BASES FOR MOBILIZATION AND DEFENSE IN TIME OF WAR, RATHER THAN AS FEEDING STATIONS FOR THE DISTRIBUTION OF FEDERAL APPROPRIATIONS TO THE CONSTITUENTS OF FAVORED MEMBERS OF CONGRESS; BUT WHOSE TASK IS ALSO TO SUPERVISE THE COMPLETION AND FORTIFICATION OF THE PANAMA CANAL ZONE AND TO DIRECT THE WORK OF EDUCATION AND ECONOMIC REGENERATION IN THE PHILIPPINE ISLANDS AND OTHER DEPENDENCIES

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POSTMASTER-GENERAL, WHO WILL DIRECT, UNDER THE BROAD RANGE OF DISCRETION CONFERRED UPON HIM BY THE LAW, WHAT SHALL BE THE DEVELOPMENT AND EXTENSION OF THE PARCEL POST, AND WHO HAS THE POWER BY HIS RULINGS GREATLY TO INCREASE THE USEFULNESS OF THE POSTAL SERVICE AND TO PLACE IT UPON A MORE BUSINESS-LIKE BASIS

MR. JOSEPHUS DANIELS

SECRETARY OF THE NAVY, WHOSE CHIEF OPPORTUNITY IS TO MAINTAIN THE PRESENT HIGH EFFICIENCY OF THE FLEET AND TO PROMOTE ECONOMY BY SECURING THE CONSOLIDATION OF THE MANY SMALL NAVY YARDS INTO A FEW STRATEGICALLY SITUATED AND ADEQUATELY EQUIPPED YARDS

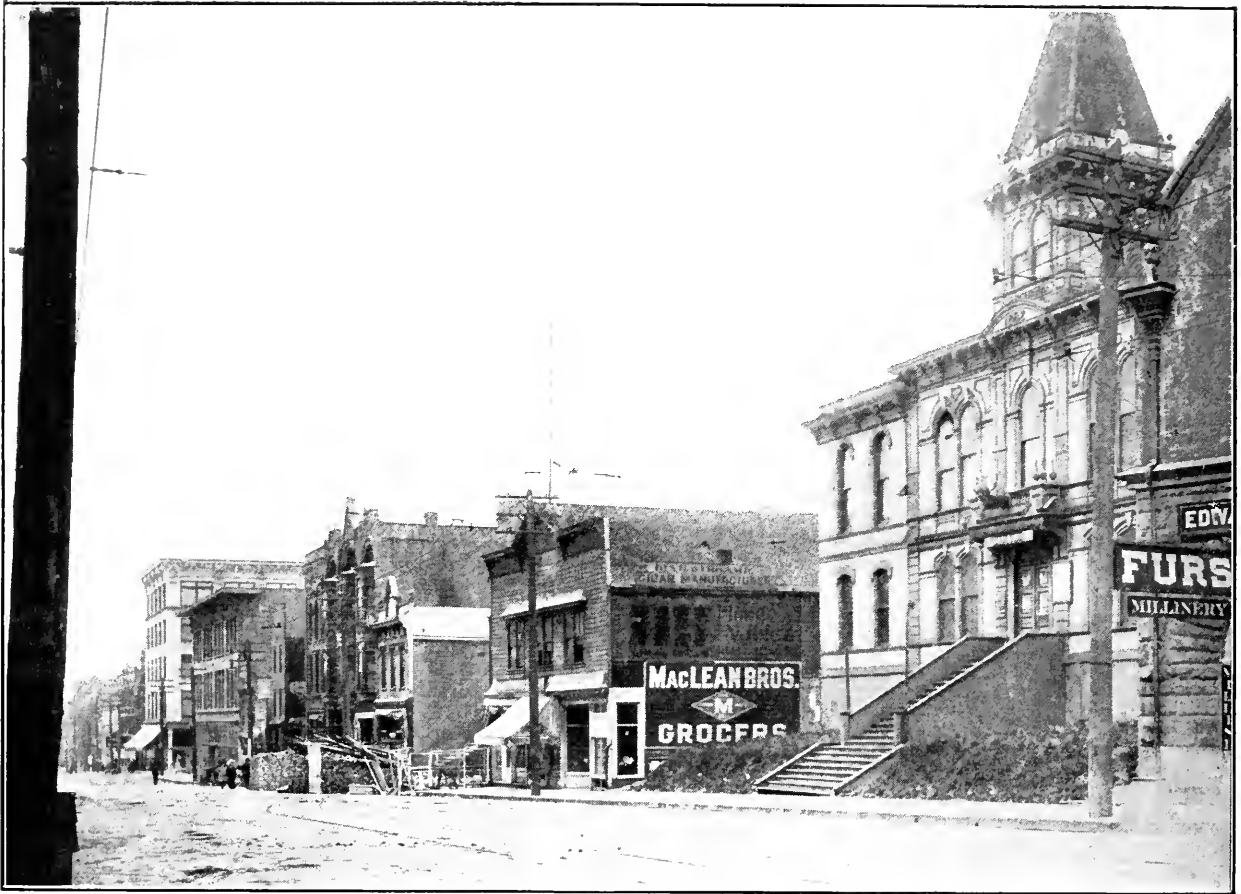
MR. JOSEPH P. TUMULTY

THE SECRETARY TO THE PRESIDENT, A POST NEEDING RARE TACT, JUDGMENT, AND ABILITY, AND OFFERING AN OPPORTUNITY FOR GREAT USEFULNESS

MR. ALEXANDER WILSON DRAKE

THE DISTINGUISHED ART EDITOR OF THE CENTURY MAGAZINE, WHO HAS BEEN A STRONG AND SANE LEADER IN AMERICAN ILLUSTRATING AND PRINTING FOR MORE THAN A GENERATION

(See Page [illegible])



THE GROWTH OF AMERICAN CITIES

THE HEART OF THE RETAIL SHOPPING DISTRICT OF TACOMA, WASH., AS IT WAS IN 1904 (UPPER PICTURE) AND AS IT IS TO-DAY (LOWER PICTURE). TACOMA'S GROWTH IN POPULATION FROM 1900 TO 1910 WAS FROM 37,714 TO 83,743, AN INCREASE OF 122 PER CENT.

ADJUSTING BIG BUSINESS AND DEMOCRACY

WHAT to do with big business, how to keep its benefits and minimize its evil effects upon the public welfare—this many-sided problem has been at the bottom of almost all the unrest of the last twenty years. The public has decided that certain businesses shall not be artificially stimulated by the tariff. Again, a special session of Congress is engaged in revising the tariff downward.

The public mind is pretty well settled, also, that the law should prevent all combinations among competitors to raise prices, to limit output, or in any way to restrain trade, and that the law should also prevent all corporations from cut-throat competition designed only to kill off rivals and tending toward monopoly.

The extreme activity of the Department of Justice under the Taft administration (it has instituted more than eighty suits in four years) has given the courts an opportunity in their decisions to show how nearly they fulfil the popular expectations.

To the beginning of Mr. Roosevelt's administration, from the passage of the Sherman Act in 1890 until 1901, eighteen suits had been begun under that law. In eight of these cases the courts issued injunctions against the defendent corporations. There were no criminal judgments. Under President Roosevelt forty-four suits were instituted. Four are still pending, ten were discontinued, in five the Government was defeated. Fifteen final injunctions and ten convictions of some or all of the defendants in the case were secured.

In the Trans-Missouri Freight decision in 1897, and in the Joint Traffic Association case which followed in 1898, the Supreme Court held that the Sherman law applied not only to contracts which were unlawful at common law, but to all, whether reasonable or unreasonable, which actually resulted in a restraint of trade; and in 1904, in the Northern Securities case, the Court held that the formation of a company to hold the control of two competing companies was a restraint of commerce. Against these decisions a part of the Court dissented on the ground that the law meant to proscribe only contracts or actions which unreasonably restrained trade.

In the Addyston Pipe case, however, in which six companies had agreed to bid for work under a fixed agreement, the Court unanimously held this to be a violation of the law.

The personnel of the Supreme Court changed during the early part of the Taft administration. When Chief Justice White handed down the opinion in the suit against the Standard Oil Company, it was found that the dissenting minority had become the majority on the Supreme Bench.

The Standard Oil Company was dissolved because it *unduly* and *unreasonably* restrained trade. The Chief Justice's opinion said that the terms "contract in restraint of trade" and "monopoly" were well known to the common law and as known to the common law they meant unreasonable restraint. The same line of reasoning by the Court led to the dissolution of the Tobacco trust, the case being conducted for the Government by the present Attorney-General, Mr. McReynolds, then acting as special counsel.

Recently other decisions have helped make clear the present status of the law.

The merger effected by the Union Pacific buying 46 per cent. of the stock of the Southern Pacific was declared illegal because in the opinion of the Court it *unduly* restricted competition and created a combination in restraint of trade even though the amount of traffic carried by the Southern Pacific in competition with the Union Pacific was but a small part of the Southern Pacific's business.

The officers of the National Cash Register Company were convicted, fined, and sentenced to jail. They were given these sentences because they had tried to crush their rivals and become a monopoly by:

1. Bribing their competitors' employees and maintaining spies to watch their rivals' operations.
2. Bearing false witness against their neighbors in business to ruin their credit.
3. Harassing their rivals with strike suits and fake patents.

They were, in fact, business buccaneers who achieved monopoly by methods entirely at variance with the ethics of the American business world.

The dissolution of the Bath Tub trust was upon the same basis as the decision in the Addyston Pipe case. The manufacturers of sanitary enameled ironware had made an agreement with the holder of a patent which protected them in the manufacture of their goods to sell to the jobbers on an agreed scale of prices and only to those jobbers who bought exclusively from the concerns in the agreement and who would sell at prices fixed by the manufacturers. The Court held that such agreements can not escape the Act because they are in the form of licenses to use a patent — that an association under such an agreement is a combination to fix prices.

On the other hand, in the suit against the United Shoe Machinery Company, which the Company won, the Court held that:

> The disintegration aimed at by the statute does not extend to reducing all manufacturers to isolated communities of the lowest degree. It is as lawful for one corporation to make every part of a steam engine and to put the machine together as it would be for one to make the boilers and another to make the wheels.

At about the same time the Court held, in the case against Mr. James A. Patten, that a corner in such articles of commerce as wheat or cotton was in restraint of trade.

In the light of these new cases it seems plain that the Sherman Law provides that:

(1) A corporation cannot make agreements with its competitors to fix prices or to limit output.

(2) That the amalgamation of the control of two, even slightly competing, railroads under any guise is illegal.

(3) That corners in articles of commerce are in restraint of trade.

(4) That corporations cannot use methods which are held to be unreasonable under the common law to crush competitors, and establish monopoly. Every new case helps to make more definite what is and is not *unreasonable* restraint, and this process will eventually build up a body of decisions behind the Sherman law adapted to the complexity of our conditions because evolved from them.

But on the other hand there is no limitation upon what parts of a business one concern may do, or upon what proportion it may do.

So far we have come in the effort to adjust big business to a democracy.

As an indication of the attitude of the new Administration toward the trust problem there are the seven bills on the New Jersey statute books which were sponsored by President Wilson in the last weeks of his Governorship.

These laws hold to be illegal combinations or agreements to create or carry out restrictions in trade or to acquire monopoly; to limit production, or fix prices; or to prevent competition in manufacturing, selling, or buying. The Sherman Act covers these clauses.

The New Jersey laws also prohibit a company to buy or hold the securities of a competitor. This prohibition has no analogy in the Federal law at present, but there is such a provision, aimed at practical monopolies that are maintained through interlocking directorates, in a trust control bill presented to Congress by Senator Williams, of Mississippi.

The New Jersey laws prohibit discriminations in prices or service between communities, directed against the use of unfair competition temporarily by a large concern to drive out a local competitor. Under the rule of reasonable interpretation of the Sherman Law such practices, in the case of the Cash Register Company, for example, were held illegal.

These laws have also provisions against stock-watering and kindred practices, but these are primarily matters under state control.

As the President says, there is nothing for any honest business to fear from these laws, and there are no fearful inferences concerning national legislation to be had from them. The adjustment of big business and democracy will go on as it has been going on, only perhaps with less apprehension in the business world, for it has been proven that eggs wrongly scrambled can, if necessary, be unscrambled again at the Government's bidding,

just as businesses poorly organized can be reorganized at the bidding of owners or creditors. No one has yet been or is likely to be sent to jail who has not been guilty of acts contrary to the ethics of American business.

A GOOD TIME IN WHICH TO CLEAN HOUSE

IT IS a happy circumstance for the country that when we finally have come to the revision of the tariff it should be in a time when business is prosperous enough to make the necessary readjustments with the least inconvenience. The railroads' earnings — one sign of the times — are good. Our foreign trade is larger than it has ever been and the opening of the Panama Canal will give it an added impetus. Moreover, the character of our foreign trade is changing; the proportion of diversified manufactures is greatly increasing.

The investigations of Wall Street and its sympathy with the unsettled conditions in the European money markets have made some business men and many men in the financial district in New York less optimistic than people in other parts of the country. There is no apprehension in the South. No less an authority than Mr. James J. Hill says that there are excellent business conditions in the Northwest, perhaps the best ever known. The great interior valley is busy and hopeful. Last year there were tremendous crops, due of course in a large measure to favorable weather, but due, also, partly to the great agricultural awakening of the last decade, the fruits of which are only now beginning to show.

Yet over this prospect of prosperity there are a few clouds. The railroad brotherhoods are not content with the present wage scale, and though their leaders are more conservative than the leaders of most other labor organizations, if they should decide to strike it would be more serious than almost any other labor disturbance. The Mexican situation also has its threatening elements.

But over the whole country, in spite of possible trouble, there is a feeling of optimism which makes it a good time to get our house in order, to revise the tariff, and, as soon as may be, in a time of tranquility to revise our currency so that when the next disturbance comes it may not find us unprepared, or force us to hasty legislation in a time of excitement.

TO DESTROY THE PORK BARREL

THE recent regular session of Congress, like its predecessors, after struggling long and hard over the appropriation bills, wasted a great deal of the public's money. It made the largest pension appropriation in the history of this or any other country, more than $180,000,000, though it is well known that much of this money will go to people who do not deserve it. The House of Representatives passed an appropriation of $25,643,000 for public buildings in which there were many such items as $10,000 for a post office in a village of 1,000 people. The reason for such things is that the Congressman from the district in which the town is thinks that such a waste of public money in his district will win him votes and that his failure to get such "pork" or graft may cost him his place. Chairman Fitzgerald, of the Committee on Appropriations, in his opposition to the bill, said:

> This bill is so scientifically constructed that I know it will be passed against my opposition. The plums are passed about so generally among members that of course a great majority will vote for the bill. We are doing a great deal of talking about economy but the sham economists who construct and vote for such measures as this make it impossible.

The bill passed the House and, in spite of the opposition of Senator O'Gorman, after a few amendments, passed the Senate.

Another appropriation measure of no better character — the River and Harbor bill — was passed in spite of the efforts of Senator Newlands. The strenuous opposition which these pork-barrel measures have encountered is a good sign. As things are at present there are only two alternatives: to pass a bill made up in a large measure of more or less wasteful favors to various congressional districts, or to pass no bill at all. The latter is the lesser of two evils.

But it is time for a change. The widespread public demand for economy, the anticipated loss in revenue from the new tariff, and the present deficit in the National Treasury give signs intelligible both to politicians and to state men that it is time to end the pork-barrel habit; not merely by occasionally defeating the more pernicious bills but by the constructive task of creating a better method of making appropriations. The present state of the public mind makes this task a great opportunity.

THE AWAKENED FARMERS

RECENTLY a letter came to the World's Work from a farmer who had read Mr. B. F. Yoakum's article showing that the high cost of selling was the farmer's most serious handicap. The writer gave a personal experience of his own in these words:

> Not long ago I sent a car of choice onions to a commission man in Philadelphia. I knew him personally and had great confidence in him. He advised me to ship, as the market was good. Before they reached Philadelphia he wrote that onions were arriving in such quantities, there might be a break. Two or three weeks later I got an itemized account of the sale of the onions for enough to cover all charges except $9 of the freight; and he asked me to send on the $9. I still think he is an honest commission man if there ever was one; and I don't know that any one was particularly to blame. But I do know that I furnished Philadelphia with a car of good onions free and paid part of the freight; and I have no doubt that the other twenty cars that went in at the same time were furnished free, but I hope the other twenty farmers were not fools enough to pay the freight.

The remedy that Mr. Yoakum suggested to the farmers for the high cost of selling was coöperative buying and selling and rural credits. These things have remade whole nations abroad. They have brought prosperity to the citrus fruit industry of California and to the apple growers of the Northwest. Rural coöperation has a firm beginning in Minnesota and Wisconsin and its beginnings are in evidence over all the country. Rural coöperation is at last beginning to stir the imagination of the American people. One New York publishing house lately had seven books on the subject submitted to it within two months. The state of Wisconsin is issuing an exhaustive report on the subject, and in April there are to be two important conferences held to discuss it: the First National Conference on Marketing and Farm Credits on April 8th, 9th, and 10th is inspired by Col. Frank P. Holland, of Dallas, Tex., the owner of *Farm and Ranch;* the other, the Farmers' Conference, under the auspices of the Sixteenth Conference for Education in the South, will meet in Richmond on April 16th, 17th, and 18th.

These conferences are teaching not only better business but the better living that is thereby possible, putting profits in the farmer's bank account and giving him a pride in his profession that will mean at least as much prosperity to others, to railroads, bankers, manufacturers, etc., in this country as it has abroad.

THE FOLLY OF FLOODS

CONGRESS now has before it for approval a plan to construct works to control the flood waters of the Sacramento River of California, to increase its navigability, decrease the violence of its floods, and reclaim great areas of overflowed land. This plan was prepared by the California Debris Commission, which is a body of engineers appointed jointly by the state and by the War Department, both of which have approved its recommendations.

The plan is to spend about 30 millions to safeguard 400,000 acres of reclaimed lands in the Sacramento Valley and to make possible the reclamation of 300,000 acres of submerged or periodically flooded lands. The cost is not unreasonable, for, besides the increase in values that the work will create, it will prevent in future losses which, from the three floods of 1904, 1907, and 1909, alone amounted to 11 million dollars. These are the tremendous figures of cost and profit in the right handling of a comparatively small river.

Compare the problem of the Sacramento with the situation in the Mississippi Valley. The Sacramento River and its tributaries

drain a watershed and basin of less than 50,000 square miles; the Missisippippi and its tributaries drain an area of 1,257,000 square miles. The total discharge of the Sacramento River at its mouth at extreme flood is about 600,000 second feet; the normal discharge of the Mississippi at New Orleans is 600,000 second feet, and during floods is, of course, immensely greater. The population of the Sacramento watershed and basin is less than a million; the population of the Mississippi Valley is more than 40 millions.

The Mississippi Valley below St. Louis is the Nile Valley of America, the immense fertile bed of a continent. Civilization was born under the beneficent influence of the Nile and Egypt has been reincarnated a nation since the English engineers have harnessed the great river. Civilization in the lower Mississippi Valley has been blighted by floods and destruction and after a hundred years of settlement the great valley is in many ways the most backward part of the country except at a few points where high bluffs have allowed an occasional city to perch like a watch-tower to overlook a semi-developed region that should be sending a wealth of produce through its markets.

The redemption of this fertile empire to the best uses of men is one of the most colossal and most pressing material tasks that confronts the Nation.

EXPERT AID TO LEGISLATORS

THE city of Cincinnati and the state of Ohio have recently followed the example of the state of Wisconsin in establishing a legislative reference library. Prof. S. G. Lowrie, whom the University of Cincinnati got from Wisconsin, is to have permanent charge of the Cincinnati library, which is to start the reference library for the benefit of the state legislators.

One of the worst evils in our state and city governments is the tremendous number of half-baked measures which are enacted — measures conceived in good intentions, but also in ignorance of the fate of similar experiments elsewhere. The technical skill to draw bills that will have the desired effect is not in the grasp of most state legislators and city councilmen, nor are they familiar with the legislative experience of other states or cities here or abroad. A well-managed legislative reference library can aid other legislatures, as the famous institution under Dr. McCarthy has aided the legislature of Wisconsin, and there is no reason why a similar institution should not be correspondingly valuable not only to Cincinnati but to other cities as well.

II

Besides providing Cincinnati with a legislative reference library under one of its professors, the University of Cincinnati is trying in other ways to be as practically useful to the city that supports it as the University of Wisconsin is to its state, which is explained in Mr. Stockbridge's article in another part of this magazine.

The engineering school of the University of Cincinnati coöperates with the manufacturers of the city to train young men in the chief local industries, its medical school acts as a laboratory for the health authorities, its teachers' college helps the school board prepare teachers, and the municipal reference library will aid councilmen to prepare bills.

Most of this work is new and it has not yet had time to show a long record of results, but it is based upon a sound theory that the seat of learning which is paid for by the city taxes should be the source of practical, helpful information for the city, and should furnish leadership from its faculty as well as leaders from its graduates.

TEN THOUSAND BOOKS A YEAR

IT IS a common idea that most of the books published in the United States are fiction; that publishers give encouragement only to fiction; and that the great mass of American readers are fiction readers only. To a degree this may be true, but it is a surprise to most people to find that of the books published in the United States during 1912 only about 10 per cent. were books of fiction, and that in England more than 20 per cent. came under this classification.

In 1910 the record of American book production was 13,470 new titles, in 1911 it was 11,123, and in 1912 it had dropped to 10,903. In 1910, the year of the greatest number of books, there were 1,539 books of fiction, 2,091 books that come under the more serious title of general literature and essays, and 943 books devoted to religion and theology. During the next two years the number of novels dropped to about a thousand and such subjects as sociology, economics, and agriculture have had a larger quota of the total.

It is true, of course, that as a rule the novels sell more copies than other kinds of books, at least to begin with, but it often happens that books of useful information, interesting biographies, and the like, reach more people than most books of fiction. It is a good sign that useful books are coming to be, as they should be, the everyday tools of our working population, farmers as well as teachers, and business men. Nor is this any reflection upon the large number of novels, for the two kinds of books are complements of each other, not competitors, and it is but a poor public that does not enjoy a good story.

DO YOU BELIEVE IN SCHOOLS?

WASHINGTON ranks first of all the states in the all-around efficiency of its schools, according to an analysis which the Russell Sage Foundation recently made of the report of the United States Commissioner of Education whose figures, in turn, are largely an analysis of the census of 1910. Massachusetts, New York, California, Connecticut, and Ohio are the next five in rank in descending order. Ten tests of efficiency were applied to reach these results.

Astonishing gaps between the best schools and the poorest schools appear when these tests are applied. For examples: Only 7 per cent. of the children of Vermont are out of school, but 44 per cent are out in Louisiana; Massachusetts has invested $115 per child in school buildings and equipment, whereas Mississippi has invested only $4; Washington spends $32 a year to educate every child, and South Carolina spends $3; every child averages 131 days of the year in school in Massachusetts and 46 days in New Mexico; the schools of Rhode Island are open, on an average, 193 days in the year and in New Mexico 100 days; Oklahoma spends 75 cents for school purposes for every $100 of its wealth, and New Mexico spends 19 cents; in New Hampshire, of every 1,000 pupils in the elementary schools, 118 enter high school and 23 enter college, but in West Virginia only 22 enter high school and 10 enter college. The most striking of all these comparisons, however, is between the average yearly salaries paid to teachers in the several states — in California and in North Carolina, $816 against $200; and, more astonishing still, in prosperous Iowa, $302. The average for the whole country is $485 a year, and this figure shows itself in its true light better when compared with the yearly wages of other occupations:

Carpenters	$802
Coal miners	600
Factory workers	550
Common laborers	513
Teachers	485

These figures give a hint of the size of the stupendous task that must be done before the quality of education in the United States is worthy of the children who receive it.

The twelve states lowest in all-around efficiency are these, named in descending order: Tennessee, Texas, Louisiana, New Mexico, Virginia, Kentucky, Arkansas, Georgia, Mississippi, North Carolina, South Carolina, and Alabama. This list indicates where the intensity of the educational problem is greatest — in the rural South. Fortunately, encouraging progress has been made in these states, for in the last forty years illiteracy among the whites has been reduced from 12 per cent. to 3 per cent., and among the Negroes from 95 per cent. to 30 per cent. Fortunately, also, in these states the forces of economic regeneration are well under way, and in every one of them are leaders who are inspired with a consuming ambition to direct the new resources of an awakening people into practical and efficient education for the common man.

A UNIFORM LAW FOR DIVORCE

THE National Conference of Commissioners on Uniform State Laws has recommended a uniform divorce law that is now in force in Delaware, New Jersey, and Wisconsin, and in practical effect in Illinois. The uniform Negotiable Instruments Act drawn by this same body is in effect in thirty-eight states and territories and in the District of Columbia, and its Warehouse Receipts Act is in force in twenty-two states and the District of Columbia.

Its uniform divorce law provides six causes for divorce: adultery, bigamy, conviction of certain crimes, extreme cruelty, wilful desertion for two years, and habitual drunkenness for two years.

It recognizes that divorce is to be dealt with by the states, not by a national divorce law, and the principal emphasis is placed upon the jurisdiction of the courts in which the divorce may be had. In the main it makes necessary a two years' residence of at least one of the parties to the suit in the state in which the suit is brought, although when the cause of the suit is adultery or bigamy this is not required.

The six causes for divorce named in this act with one exception are identical with the six causes that were recommended by the British Royal Commission on Divorce and Matrimonial Causes, whose report was described in the WORLD'S WORK for last January. This exception is that the British Commission recommends incurable insanity where the American Conference recommends bigamy as a cause for divorce. Thus the most careful and distinguished students of this subject in the two foremost English-speaking countries are practically agreed unanimously upon the justifiable grounds for divorce.

A PERMANENT MEXICAN PROBLEM

FRANCISCO MADERO is dead and his short-lived administration that came in on one revolution went out on another, as have so many Mexican administrations before it. Only three times since 1810, when Mexico began its war of freedom from Spain, has the presidency changed hands without bloodshed. The first time was before the French intervention under Maximilian, in 1861; the second time was in 1880, at the end of Porfirio Diaz's first term when, in obedience to a constitutional provision against second terms, he gave up the presidency to General Gonzalez. The third peaceful transfer came when Diaz, in spite of the constitution, succeeded Gonzalez.

The fundamental idea underlying a republican form of government is the peaceful enforcement of the people's wishes. In this the Mexican republic has failed, for the only lasting peace which it has known was the practical dictatorship of Porfirio Diaz.

Mexico's past gives little encouragement to hope for a peaceful government by the people, more than half of whom are Indians or chiefly of Indian extraction. The long peaceful period under Diaz seemingly did not build up the character and the intelligence equal to the responsibilities of republican government. During the last part of Diaz's long rule people in Mexico were continually asking, "After Diaz, what? A real republican government, another dictator, or civil war?" So far, there have been two years of civil war.

The long reign of peace under Diaz tempted much foreign capital, American, English, and to a lesser extent German and French capital, into Mexico. That capital asks for protection. And, whatever we think about using the army and navy to guarantee the safety of our citizens' money outside our own country, that is the policy of England and Germany, but we do look with disfavor upon their or any other European intervention in any republic of the two Americas. This attitude leaves on our hands a grave responsibility not only now but for many years to come.

THE JAPAN OF THE NEAR EAST

BULGARIA is the Japan of the Near East. This is the most striking fact that has been brought to light by the Balkan War. It means that a new and lusty nation among the considerable

Powers of the world must hereafter be reckoned with. Bulgarian diplomacy created the league of the Balkan States and chose the auspicious hour to launch its power against Turkey; Bulgarian strategy and leadership planned and executed the victorious campaign; and the Bulgarian army was the effective body that won the decisive victories.

But more important than these things, and the reason for them, are the Bulgarian people who have revealed themselves in this play of nations. Here is a nation that has built a modern railroad system which serves both its military and its economic needs; that has developed its agriculture; that has opened its mines; that has seriously undertaken the reforestation of its mountains; that has built Sofia into a modern, sanitary, and efficient capital city; that has, above all, grown into a national unity and a national consciousness. It has done these things in a neglected and mountainous corner of Europe, harassed by powerful nations that are greedy for its territory and that have added to the violence of their racial and territorial ambitions bitter religious antagonisms. Bulgarian diplomacy must now deal with the sharpened appetites of its allies and with a new set of complications of the old struggle between Russia and Austria for control of the Balkan Peninsula, and of Great Britain to keep both from threatening the Suez Canal.

Bulgaria's problem is as perplexing as Japan's. But at least the world has discovered a new economic unit and a new national power— and a new interest in refreshing its memory of an almost forgotten page of the atlas.

FOR A CLOUDLESS SKY OF INVESTMENTS

IT IS estimated that "get-rich-quick" promoters take from the public 120 million dollars annually.

The people of practically every state help pay this toll except Kansans, who are nearly exempt. Two years ago, Mr. J. N. Dolley, the Bank Commissioner of Kansas, got the state legislature to pass a "blue sky law" designed to destroy the business of the get-rich-quick promoter. He asserts that during the two years that the law has been in force it has saved the people of Kansas more money than is needed to run the state government. And its success has made such an impression that in about thirty of the thirty-eight state legislatures in session this year similar measures have been introduced, patterned largely after the Kansas law.

The Investment Bankers' Association feels that the Kansas law is too strict, hampering legitimate business more than is necessary, and that future laws should be left more open for legitimate enterprise to enlist the services of the dollars saved from the financial sharper, but it is as anxious as the Kansas authorities to save the money from the sharpers.

State bank commissioners, legislatures, the investment bankers, a lately organized international association, and the post-office authorities have all declared war on the get-rich-quick game, and their efforts ought to save a large proportion of the 120 millions of dollars that now slip into the unprofitable channels of unsound promotions. And this cleaning-up process will, also, if thoroughly done, deservedly increase the public confidence in the whole stock, bond, and security business.

ABOUT AN OIL FLOTATION

IN THE February number of the WORLD'S WORK there was an article headed, "A Warning Written in Oil," which was a story of the flotation of the preferred and common stocks of a petroleum company by Messrs. William Salomon & Co., of New York, and other bankers.

After that article was written, and while it was on the press, Mr. George G. Henry, a member of that firm, was a witness before the Pujo Committee. He added several details which conflict in some respects with the facts brought out in former testimony. For instance, it was stated that the bankers paid $10,000,000 in cash and received $10,000,000 preferred stock and $10,000,000 common. It appears from an exhibit put into record during Mr. Henry's testimony that the bankers paid $8,215,662, for which they

received $10,000,000 preferred stock and $7,572,845 common stock.

It was not known at the time the article was written what proportion of the stock was sold by the syndicate of Salomon & Co. and the allied houses at private sale and what proportion was sold through public speculative operations. Mr. Henry's testimony brought out the fact that practically all of both the preferred and common stock had been sold privately by the bankers in the syndicate to their own customers and others before the operations on the Curb and Stock Exchange began. It appears, therefore, that the stock which was turned over so often in the market places (twice the entire capitalization of the company was sold in one month) was traded in after the syndicate had sold all their stock privately, at the price of 91 for the preferred and 40 for the common, respectively.

Since there has been a great deal of public comment on this particular company and the methods of its promotion and flotation, and since one Federal suit may grow out of circumstances that arose in the investigation of it, it seems good judgment to reiterate the statements made in that article to the effect that no criticism of the oil company in question was implied in that story. The oil company seems to be a perfectly legitimate development of legitimate resources, with a strong earning capacity and good management. The use of the phrase "gambling" in connection with its stock in the former article, referred loosely, of course, to the buying and selling of this class of stock by the public, and not to the industry itself.

The lesson of the whole incident, namely, the warning not to buy speculative stocks at times of great market excitement and manipulation, remains.

SAFETY AND AN INCREASE IN VALUE

A GOOD many letters come regularly to the WORLD'S WORK from people who deny emphatically any desire to speculate, even in the slightest degree, but who, nevertheless, believe there is some way in which they can invest and have their investment increase in value, without any speculation entering into the transaction. Not infrequently the writers of these letters are business men and others who have surplus money to put to work under circumstances which may make it perfectly proper for them to assume some of the ordinary risks of investment, provided they do so in a sensible and intelligent way; and it is more especially for such investors, rather than for those whose circumstances demand that they hew closely all the time to the line of safety and assured income, that this article is written. Let us take two typical cases.

A Michigan merchant wrote not long since to explain that he had several thousand dollars a year that he did not want to put back into his business, and to ask for suggestions of bonds that in all probability would increase in value. He said he would, of course, expect to get securities which paid at least 5 per cent. and which could be sold in a hurry in case he happened to need the money. His letter ended with the strict admonition that the magazine, in making suggestions, should bear in mind that he didn't want to speculate.

A letter from a young man "down in Maine" began by saying that the writer was unmarried and, therefore, felt he could take a larger risk with his money than would be involved in buying gilt-edged bonds. "But", he added, "I want a strictly conservative investment". And then, somewhat naïvely: "Am I right in thinking that, if I were to buy Steel common, I could be assured of a good income regularly, with a fair chance of selling at a profit of, say, ten points two or three years hence, when I anticipate using this money to go into business for myself?"

Of the two courses upon which these investors were purposing to embark, the

merchant's was obviously the safer, by far. Yet he was told, somewhat less emphatically than the young man, that he had his sails set under false colors, if he really expected to get through without speculating. It was suggested to him that, if he wanted more substantial profits than a possible three to five points promised by the average bond of the middle class, which may have a variety of reasons for standing at a discount other than any serious deficiency in underlying security, his selections would have to be made from a class of issues about whose future there was some uncertainty. Under the circumstances, there was no valid objection to his buying "business men's bonds", but it would be careless, if not dangerous, either for him to ignore the risks attendant upon that kind of investment, or, having got the risks clearly in mind, not to provide for their supervision by an experienced banker.

To the young man, it seemed necessary merely to recite a bit of the market history of Steel common to make it clear to him that, if he were to buy a stock, he might be compelled to experience a far greater amount of speculative emotion than he bargained for.

The one, no less than the other, of these two cases plainly called for the suggestion of some kind of safe security which, nevertheless, had some possibilities of profit above the interest. As it turned out, both investors put their money into convertible bonds — a type of securities which someone once described aptly as possessing a sort of "heads I win, tails I don't lose" quality. Such bonds are just now enjoying wide popularity in the general market. Almost all the plans for raising new money, announced by the railroads since the first of the year, have contemplated the issuance of convertible bonds. Five of the recent issues total more than $170,000,000.

In these convertible bonds investors who are imaginative and who have a right to give up a little of the security of first mortgage bonds can find a reasonable amount of protection against loss, with a prospect of a rise in price.

In the present generation of these bonds, one rarely meets with an issue that is a lien on property, or even on collateral, but, fortunately, plenty are to be found with the backing of the credit of strong and healthy companies. In this sense, the average convertible may be said to be a fairly estimable member of investment society. But from their security alone no one would contend that such bonds are really worth the prices which most of them command in the open market. Take as an example the new issue of Norfolk & Western 4½ per cent. bonds. In February they were being bought in large quantities at between 105 and 106. Considered as straight debentures to hold through to maturity, the yield at those prices figured but a trifle more than 4 per cent., whereas that road's divisional, first mortgage, and general lien 4 per cent. bonds — bonds of a materially higher investment order — could be had to yield nearly 4½ per cent.

It is here that the peculiar characteristics of the convertible come into play — here that the element of speculative chance manifests itself. The market value of Norfolk & Western 4½'s was being made, not merely on the basis of intrinsic investment worth, but very largely on the strength of the privilege extended to the holders of the bonds of exchanging them, after September 1, 1913, and before September 1, 1923, dollar for dollar, face value, for Norfolk & Western common stock. In other words, the premium on the bonds was the market's appraisal of the worth, roughly speaking, of an option, exercisable within the stated period, on a stock paying dividends at the rate of 6 per cent. annually, which has sold at $119.25 per share as against the current price of about $108.

Manifestly, the privilege of exchange, which makes a bond a "convertible", must depend for its value in all cases, no matter how it may be defined, solely upon the value of the stock. That is why convertible bonds are unstable. When the stocks for which they are exchangeable rise in market price, whether because of a genuine increase in investment worth or simply as the result of the activities of some group of speculative buyers of securities, the bonds rise, too. When the stocks fall, the bonds fall along with them, although not below a given point, fixed, as in the case of any other bonds, by the

strength of the security behind them, either property or credit.

For the purpose of illustrating just how varied the market fortunes of a convertible bond may be, it is perhaps best to take some issue whose history is complete. One which comes to mind as having had an unusually eventful, though brief, career is that of the Union Pacific 4 per cent. bonds put out in 1901. These bonds were authorized to the total amount of $100,000,000, but only $40,000,000 were actually issued. They differed from the more modern railroad convertibles in that they carried a first lien on a considerable part of the road's branch mileage as well as a large amount of treasury securities. But this larger element of underlying security made them scarcely any more stable in market price. They were convertible into the common stock of the company, then a 4 per cent. dividend payer, at par at any time before May, 1906, after which they might be redeemed by the company at a premium of 2½ per cent.

Stockholders were first invited to subscribe to the bonds at par at a time when their shares were selling at about 95. Early quotations for the convertibles in the open market, however, were at 103. That year they went on up to 129 along with an advance in the stock to 133. In 1902, the bonds ranged between 105⅛ and 113⅞, with the stock between 93½ and 113¼. Then along came the financial disturbance of 1903, in the midst of which Union Pacific common dropped as low as 65¾. The low point for the bonds that year, however, was 90⅝. With the improvement in financial conditions generally, during the following year, a gradual advance in the stock to 117 carried the bonds to 116½. In 1905, the year preceding the expiration of the conversion privilege, the bonds rose spectacularly to 150 in sympathy with an advance in the stock to 151¾.

An increase in the annual rate of dividends on the stock from 4 to 5 per cent. had taken place, but that did not suffice to explain these high prices. One hundred and fifty for a five per cent. stock meant a yield of only 3¼ per cent. — less than the current return on gilt edged savings bank bonds! The climax to the incident was to come later on.

One of the surprising things about this piece of financial history was that, at the time of the expiration of the conversion privilege, the discovery was made that the extraordinary rise in the price of the stock had failed to tempt somewhat more than a half million dollars par value of the bonds from the strong-boxes of their owners. Much to the credit of the Union Pacific officials, however, they spent a good deal of time and money in an attempt, through advertising, to advise those holders that the time for conversion had been extended and that, therefore, there was still the opportunity to take advantage of a valuable privilege. Yet the attempt failed, and eventually the company availed itself of its privilege of calling the bonds for redemption at 102½. A few months later came one of the dramatic incidents in the career of the late Mr. Harriman, when he surprised the holders of Union Pacific common stock, no less than the shrewdest followers of railroad affairs generally, by the announcement that henceforth those shares would get dividends at the rate of 10 per cent. per annum. They have since sold at an average annual high price of 193, and an average annual low price of 141.

This biography of Union Pacific 4 per cent. convertible bonds of 1901 is presented somewhat in detail in the hope that it may suggest that the type of securities of which those bonds were representative is not intended for people who invest solely because they want income, who have no knowledge of the stock market, and who lack the training to keep themselves informed intimately about the affairs of the companies whose securities they hold. For such investors, chance of profit will in all cases be wisely substituted for quality in underlying security, and seldom with any sacrifice of income. For the investor who is looking primarily for increase in value the biography is intended, not as a precedent of the degree of possible profits in any of the present-day convertible securities, but as a suggestion that he should be very sure to find out what he is paying for just a bond.

THE NEW FREEDOM

A CALL FOR THE EMANCIPATION OF THE GENEROUS ENERGIES OF A PEOPLE

BY

WOODROW WILSON

IV

BENEVOLENCE, OR JUSTICE?

THE doctrine that monopoly is inevitable and that the only course open to the people of the United States is to submit to and regulate it found a champion during the campaign of 1912 in the new party, or branch of the Republican party, founded under the leadership of Mr. Roosevelt, with the conspicuous aid,— I mention him with no satirical intention, but merely to set the facts down accurately,— of Mr. George W. Perkins, organizer of the Steel Trust and the Harvester Trust, and with the support of more than three millions of citizens, many of them among the most patriotic, conscientious, and high-minded men and women of the land.

The fact that its acceptance of monopoly was a feature of the new party platform from which the attention of the generous and just was diverted by the charm of a social programme of great attractiveness to all concerned for the amelioration of the lot of those who suffer wrong and privation, and the further fact that, even so, the platform was repudiated by the majority of the Nation, render it no less necessary to reflect on the significance of the confession made for the first time by any party in the country's history. It may be useful, in order to the relief of the minds of many from an error of no small magnitude, to consider now, the heat of a Presidential contest being past, exactly what it was that Mr. Roosevelt proposed.

Mr. Roosevelt attached to his platform some very splendid sug-

gestions as to noble enterprises which we ought to undertake for the uplift of the human race; but when I hear an ambitious platform put forth, I am very much more interested in the dynamics of it than in the rhetoric of it. I have a very practical mind, and I want to know who are going to do those things and how they are going to be done. If you have read the trust plank in that platform as often as I have read it, you have found it very long, but very tolerant. It did not anywhere condemn monopoly, except in words: its essential meaning was that the trusts have been bad and must be made to be good. You know that Mr. Roosevelt long ago classified trusts for us as good and bad, and he said that he was afraid only of the bad ones. Now he does not desire that there should be any more bad ones, but proposes that they should all be made good by discipline, directly applied by a commission of executive appointment. All he explicitly complains of is lack of publicity and lack of fairness; not the exercise of power, for throughout that plank the power of the great corporations is accepted as the inevitable consequence of the modern organization of industry. All that it is proposed to do is to take them under control and regulation. The national administration having for sixteen years been virtually under the regulation of the trusts, it would be merely a family matter were the parts reversed and were the other members of the family to exercise the regulation. And the trusts, apparently, which might, in such circumstances, comfortably continue to administer our affairs under the mollifying influences of the Federal Government, would then, if you please, be the instrumentalities by which all the humanistic, benevolent programme of the rest of that interesting platform would be carried out!

I have read and reread that plank, so as to be sure that I get it right. All that it complains of is, — and the complaint is a just one, surely,— that these gentlemen exercise their power in a way that is secret. Therefore, we must have publicity. Sometimes they are arbitrary; therefore, they need regulation. Sometimes they do not consult the general interests of the community; therefore, they need to be reminded of those general interests by an industrial commission. But at every turn it is the trusts who are to do us good, and not we ourselves.

Again, I absolutely protest against being put into the hands of trustees. Mr. Roosevelt's conception of government is Mr. Taft's conception, that the Presidency of the United States is the presidency of a board of directors. I am willing to admit that if the people of the United States cannot get justice for themselves, then it is high

time that they should join the third party and get it from somebody else. The justice proposed is very beautiful; it is very attractive; there were planks in that platform which stir all the sympathies of the heart; they proposed things that we all want to do; but the question is, Who is going to do them? Through whose instrumentality? Are Americans ready to ask the trusts to give us, in pity, what we ought, in justice, to take?

The third party says that the present system of our industry and trade has come to stay. Mind you, these artificially-built-up things, these things that can't maintain themselves in the market without monopoly, have come to stay, and the only thing that the Government can do, the only thing that the third party proposes should be done, is to set up a commission to regulate them. It accepts them. It says: "We will not undertake, it were futile to undertake, to prevent monopoly, but we will go into an arrangement by which we will make these monopolies kind to you. We will guarantee that they shall be pitiful. We will guarantee that they shall pay the right wages. We will guarantee that they shall do everything kind and public-spirited, which they have never heretofore shown the least inclination to do."

Don't you realize that that is a blind alley? You can't find your way to liberty that way. You can't find your way to social reform through the forces that have made social reform necessary.

The fundamental part of such a programme is that the trusts shall be recognized as a permanent part of our economic order, and that the Government shall try to make trusts the ministers, the instruments, through which the life of this country shall be justly and happily developed on its industrial side. Now, everything that touches our lives sooner or later goes back to the industries which sustain our lives. I have often reflected that there is a very human order in the petitions in our Lord's prayer. For we pray first of all, "Give us this day our daily bread," knowing that it is useless to pray for spiritual graces on an empty stomach, and that the amount of wages we get, the kind of clothes we wear, the kind of food we can afford to buy, is fundamental to everything else.

Those who administer our physical life, therefore, administer our spiritual life; and if we are going to carry out the fine purpose of that great chorus which supporters of the third party sang almost with religious fervor, then we have got to find out through whom these purposes of humanity are going to be realized. It is a mere enterprise, so far as that part of it is concerned, of making the monopolies philanthropic.

I do not want to live under a philanthropy. I do not want to be taken care of by the Government, either directly or by any instruments through which the Government is acting. I want only to have right and justice prevail, so far as I am concerned. Give me right and justice and I will undertake to take care of myself. If you enthrone the trusts as the means of the development of this country under the supervision of the Government, then I shall pray the old Spanish proverb, "God save me from my friends, and I'll take care of my enemies."

Because I want to be saved from these friends. Observe that I say these friends, for I am ready to admit that a great many men who believe that the development of industry in this country through monopolies is inevitable intend to be the friends of the people. Though they profess to be my friends, they are undertaking a way of friendship which renders it impossible that they should do me the fundamental service that I demand — namely, that I should be free and that I should have the same opportunities that everybody else has.

For I understand it to be the fundamental proposition of American liberty that we do not desire special privilege, because we know special privilege will never comprehend the general welfare. This is the fundamental, spiritual difference between adherents of the party that has just taken charge of the Government and those who have been in charge of it in recent years. They are so indoctrinated with the idea that only the big business interests of this country understand the United States and can make it prosperous that they cannot divorce their thoughts from that obsession. They have put the Government into the hands of trustees, and Mr. Taft and Mr. Roosevelt were the rival candidates to preside over the board of trustees. They were candidates to serve the people, no doubt, to the best of their ability, but it was not their idea to serve them directly; they proposed to serve them indirectly through the enormous forces already set up, which are so great that there is almost an open question whether the Government of the United States with the people back of it is strong enough to overcome and rule them.

Shall we try to get the grip of monopoly away from our lives, or shall we not? Shall we withhold our hand and say monopoly is inevitable, that all that we can do is to regulate it? Shall we say that all that we can do is to put government in competition with monopoly and try its strength against it? Shall we admit that the

creature of our own hands is stronger than we are? We have been dreading all along the time when the combined power of high finance would be greater than the power of the Government. Have we come to a time when the President of the United States or any man who wishes to be President must doff his cap in the presence of this high finance, and say, "You are our inevitable master, but we will see how we can make the best of it?"

We are at the parting of the ways. We have, not one or two or three, but many, established and formidable monopolies in the United States. We have, not one or two, but many, fields of endeavor into which it is difficult, if not impossible, for the independent man to enter. We have restricted credit, we have restricted opportunity, we have controlled development, and we have come to be one of the worst ruled, one of the most completely controlled and dominated, governments in the civilized world — no longer a government by free opinion, no longer a government by conviction and the vote of the majority, but a government by the opinion and the duress of small groups of dominant men.

If the Government is to tell big business men how to run their business, then don't you see that big business men have to get closer to the Government even than they are now? Don't you see that they must capture the Government, in order not to be restrained too much by it? Must capture the Government? They have already captured it. Are you going to invite those inside to stay inside? They don't have to get there. They are there. Are you going to own your own premises, or are you not? That is your choice. Are you going to say: "You didn't get into the house the right way, but you are in there, God bless you; we will stand out here in the cold and you can hand us out something once in a while?"

At the least, under the plan I am opposing, there will be an avowed partnership between the Government and the trusts. I take it that the firm will be ostensibly controlled by the senior member. For I take it that the Government of the United States is at least the senior member, though the younger member has all along been running the business. But when all the momentum, when all the energy, when a great deal of the genius, as so often happens in partnerships the world over, is with the junior partner, I don't think that the superintendence of the senior partner is going to amount to very much. And I don't believe that benevolence can be read into the hearts of the trusts by the superintendence and suggestions of the Federal Government; because the Government has never within my recollection

had its suggestions accepted by the trusts. On the contrary, the suggestions of the trusts have been accepted by the Government.

There is no hope to be seen for the people of the United States until the partnership is dissolved. And the business of the party now entrusted with power is going to be to dissolve it.

Those who supported the third party supported, I believe, a programme perfectly agreeable to the monopolies. How those who have been fighting monopoly through all their career can reconcile the continuation of the battle under the banner of the very men they have been fighting, I cannot imagine. I challenge the programme in its fundamentals as not a progressive programme at all. Why did Mr. Gary suggest this very method when he was at the head of the Steel Trust? Why is this very method commended here, there, and everywhere by the men who are interested in the maintenance of the present economic system of the United States? Why do the men who do not wish to be disturbed urge the adoption of this programme? The rest of the programme is very handsome; there is beating in it a great pulse of sympathy for the human race. But I do not want the sympathy of the trusts for the human race. I do not want their condescending assistance.

And I warn every progressive Republican that by lending his assistance to this programme he is playing false to the very cause in which he had enlisted. That cause was a battle against monopoly, against control, against the concentration of power in our economic development, against all those things that interfere with absolutely free enterprise. I believe that some day these gentlemen will wake up and realize that they have misplaced their trust, not in an individual, it may be, but in a programme which is fatal to the things which we hold dearest.

If there is any meaning in the things I have been urging, it is this: that the incubus that lies upon this country is the present monopolistic organization of our industrial life. That is the thing which certain Republicans became "insurgents" in order to throw off. And yet some of them allowed themselves to be so misled as to go into the camp of the third party in order to remove what the third party proposed to legalize. My point is that this is a method conceived from the point of view of the very men who are to be controlled, and that this is just the wrong point of view from which to conceive it.

I said not long ago that Mr. Roosevelt was promoting a plan for the control of monopoly which was supported by the United States

Steel Corporation. Mr. Roosevelt denied that he was being supported by more than one member of that corporation. He was thinking of money. I was thinking of ideas. I did not say that he was getting money from these gentlemen; it was a matter of indifference to me where he got his money; but it was a matter of a great deal of difference to me where he got his ideas. He got his idea with regard to the regulation of monopoly from the gentlemen who form the United States Steel Corporation.

I am perfectly ready to admit that the gentlemen who control the United States Steel Corporation have a perfect right to entertain their own ideas about this and to urge them upon the people of the United States; but I want to say that their ideas are not my ideas; and I am perfectly certain that they would not promote any idea which interfered with their monopoly. Inasmuch, therefore, as I hope and intend to interfere with monopoly just as much as possible, I cannot subscribe to arrangements by which they know that it will not be disturbed.

The Roosevelt plan is that there shall be an industrial commission charged with the supervision of the great monopolistic combinations which have been formed under the protection of the tariff, and that the Government of the United States shall see to it that these gentlemen who have conquered labor shall be kind to labor. I find, then, the proposition to be this: That there shall be two masters, the great corporation, and over it the Government of the United States; and I ask who is going to be master of the Government of the United States? It has a master now — those who in combination control these monopolies. And if the Government controlled by the monopolies in its turn controls the monopolies, the partnership is finally consummated

I don't care how benevolent the master is going to be, I will not live under a master. That is not what America was created for. America was created in order that every man should have the same chance as every other man to exercise mastery over his own fortunes. What I want to do is analogous to what the authorities of the city of Glasgow did with tenement houses. I want to light and patrol the corridors of these great organizations in order to see that nobody who tries to traverse them is waylaid and maltreated. If you will but hold off the adversaries, if you will but see to it that the weak are protected, I will venture a wager with you that there are some men in the United States, now weak, economically weak, who have brains enough to compete with these gentlemen and who will presently come

into the market and put these gentlemen on their mettle. And the minute they come into the market there will be a bigger market for labor and a different wage scale for labor.

Because it is susceptible of convincing proof that the high-paid labor of America,— where it is high paid,— is cheaper then the low-paid labor of the continent of Europe. Do you know that about ninety per cent. of those who are employed in labor in this country are not employed in the "protected" industries, and that their wages are almost without exception higher than the wages of those who are employed in the "protected" industries? There is no corner on carpenters, there is no corner on bricklayers, their is no corner on scores of individual classes of skilled laborers; but there is a corner on the poolers in the furnaces, there is a corner on the men who dive down into the mines; they are in the grip of a controlling power which determines the market rates of wages in the United States. Only where labor is free is labor highly paid in America.

When I am fighting monopolistic control, therefore, I am fighting for the liberty of every man in America, and I am fighting for the liberty of American industry.

It is significant that the spokesman for the plan of adopting monopoly declares his devoted adherence to the principle of "protection." Only those duties which are manifestly too high even to serve the interests of those who are directly "protected" ought in his view to be lowered. He declares that he is not troubled by the fact that a very large amount of money is taken out of the pocket of the general taxpayer and put into the pocket of particular classes of "protected" manufacturers, but that his concern is that so little of this money gets into the pocket of the laboring man and so large a proportion of it into the pockets of the employers. I have searched his programme very thoroughly for an indication of what he expects to do in order to see to it that a larger proportion of this "prize" money gets into the pay envelope, and have found none. Mr. Roosevelt, in one of his speeches, proposed that manufacturers who did not share their profits liberally enough with their workmen should be penalized by a sharp cut in the "protection" afforded them; but the platform, so far as I could see, proposed nothing.

Moreover, under the system proposed, most employers,— at any rate, practically all of the most powerful of them,— would be, to all intents and purposes, wards and protégés of the Government which is the master of us all; for no part of this programme can be discussed

intelligently without remembering that monopoly, as handled by it, is not to be prevented, but accepted. It is to be accepted and regulated. All attempt to resist it is to be given up. It is to be accepted as inevitable. The Government is to set up a commission whose duty it will be, not to check or defeat it, but merely to regulate it under rules which it is itself to frame and develop. So that the chief employers will have this tremendous authority behind them: what they do, they have the license of the Federal Government to do.

And it is worth the while of the workingmen of the country to recall what the attitude toward organized labor has been of these masters of consolidated industries whom it is proposed that the Federal Government should take under its patronage as well as under its control.

They have been the stoutest and most successful opponents of organized labor, and they have tried to undermine it in a great many ways. Some of the ways they have adopted have worn the guise of philanthropy and good-will, and have no doubt been used, for all I know, in perfect good faith. Here and there they have set up systems of profit-sharing, of compensation for injuries, and of bonuses, and even pensions; but every one of these plans has merely bound their workingmen more tightly to themselves. Rights under these various arrangements are not legal rights. They are merely privileges which employees enjoy only so long as they remain in the employment and observe the rules of the great industries for which they work. If they refuse to be weaned away from their independence they cannot continue to enjoy the benefits extended to them.

When you have thought the whole thing out, therefore, you will find that the programme of the new party legalizes monopolies and systematically subordinates workingmen to them and to plans made by the Government both with regard to employment and with regard to wages. Take the thing as a whole, and it looks strangely like economic mastery over the very lives and fortunes of those who do the daily work of the Nation; and all this under the overwhelming power and sovereignty of the National Government. What most of us are fighting for is to break up this very partnership between big business and the Government. We call upon all intelligent men to bear witness that if this plan were consummated, the great employers and capitalists of the country would be under a more overpowering temptation than ever to take control of the Government and keep it subservient to their purpose.

What a prize it would be to capture! How unassailable would be the majesty and the tyranny of monopoly if it could thus get sanction of law and the authority of government! By what means, except open revolt, could we ever break the crust of our life again and become free men, breathing an air of our own, living lives that we wrought out for ourselves?

You cannot use monopoly in order to serve a free people. You cannot use great combinations of capital to be pitiful and righteous when the consciences of great bodies of men are enlisted, not in the promotion of special privilege, but in the realization of human rights. When I read those beautiful portions of the programme of the third party devoted to the uplift of mankind and see noble men and women attaching themselves to that party in the hope that regulated monopoly may realize these dreams of humanity, I wonder whether they have really studied the instruments through which they are going to do these things. The man who is leading the third party has not changed his point of view since he was President of the United States. I am not asking him to change it. I am not saying that he has not a perfect right to retain it. But I do say that it is not surprising that a man who had the point of view with regard to the government of this country which he had when he was President was not chosen as President again, and allowed to patent the present processes of industry and personally direct them how to treat the people of the United States.

There has been a history of the human race, you know, and a history of government; it is recorded; and the kind of thing proposed has been tried again and again and has always led to the same result. History is strewn all along its course with the wrecks of governments that tried to be humane, tried to carry out humane programmes through the instrumentality of those who controlled the material fortunes of the rest of their fellow-citizens.

I do not trust any promises of a change of temper on the part of monopoly. Monopoly never was conceived in the temper of tolerance. Monopoly never was conceived with the purpose of general development. It was conceived with the purpose of special advantage. Has monopoly been very benevolent to its employees? Have the trusts had a soft heart for the working people of America? Have you found trusts that cared whether women were sapped of their vitality or not? Have you found trusts who are very scrupulous about using children in their tender years? Have you found trusts that were keen to protect the lungs and the health and the freedom of their

employees? Have you found trusts that thought as much of their men as they did of their machinery? Then who is going to convert these men into the chief instruments of justice and benevolence?

If you will point me to the least promise of disinterestedness on the part of the masters of our lives, then I will conceive you some ray of hope; but only upon this hypothesis, only upon this conjecture: that the history of the world is going to be reversed, and that the men who have the power to oppress us will be kind to us, and will promote our interests, whether our interests jump with theirs or not.

After you have made the partnership between monopoly and your Government permanent, then I invite all the philanthropists in the United States to come and sit on the stage and go through the motions of finding out how they are going to get philanthropy out of their masters.

I do not want to see the special interests of the United States take care of the workingmen, women, and children. I want to see justice, righteousness, fairness, and humanity displayed in all the laws of the United States, and I do not want any power to intervene between the people and their Government. Justice is what we want, not patronage and condescension and pitiful helpfulness. The trusts are our masters now, but I for one do not care to live in a country called free even under kind masters. I prefer to live under no masters at all.

I agree that as a nation we are now about to undertake what may be regarded as the most difficult part of our governmental enterprises. We have gone along so far without very much assistance from our Government. We have felt, and felt more and more in recent months, that the American people were at a certain disadvantage as compared with the people of other countries, because of what the governments of other countries were doing for them and our Government omitting to do for us.

It is perfectly clear to every man who has any vision of the immediate future, who can forecast any part of it from the indications of the present, that we are just upon the threshold of a time when the systematic life of this country will be sustained, or at least supplemented, at every point by governmental activity. And we have now to determine what kind of governmental activity it shall be; whether, in the first place, it shall be direct from the Government itself, or whether it shall be indirect, through instrumentalities which have already constituted themselves and which stand ready to supersede the Government.

I believe that the time has come when the governments of this country, both state and national, have to set the stage, and set it very minutely and carefully, for the doing of justice to men in every relationship of life. It has been free and easy with us so far; it has been go as you please; it has been every man look out for himself; and we have continued to assume, up to this year when every man is dealing, not with another man, in most cases, but with a body of men whom he has not seen, that the relationships of property are the same that they always were. We have great tasks before us, and we must enter on them as befits men charged with the responsibility of shaping a new era.

We have a great programme of governmental assistance ahead of us in the coöperative life of the Nation; but we dare not enter upon that programme until we have freed the Government. That is the point. Benevolence never developed a man or a Nation. We do not want a benevolent government. We want a free and a just government. Every one of the great schemes of social uplift which are now so much debated by noble people amongst us is based, when rightly conceived, upon justice, not upon benevolence. It is based upon the right of men to breathe pure air, to live; upon the right of women to bear children, and not to be over-burdened so that disease and breakdown will come upon them; upon the right of children to thrive and grow up and be strong; upon all these fundamental things which appeal, indeed, to our hearts, but which our minds perceive to be part of the fundamental justice of life.

Politics differs from philanthropy in this: that in philanthropy we sometimes do things through pity merely, while in politics we act always, if we are righteous men, on grounds of justice and large expediency for men in the mass. Sometimes in our pitiful sympathy with our fellow-men we must do things that are more than just. We must forgive men. We must help men who have gone wrong. We must sometimes help men who have gone criminally wrong. But the law does not forgive. It is its duty to equalize conditions, to make the path of right the path of safety and advantage, to see that every man has a fair chance to live and to serve himself, to see that injustice and wrong are not wrought upon any.

We ought not to permit passion to enter into our thoughts or our hearts in this great matter; we ought not to allow ourselves to be governed by resentment or any kind of evil feeling, but we ought, nevertheless, to realize the seriousness of our situation. That seriousness consists, singularly enough, not in the malevolence of the men

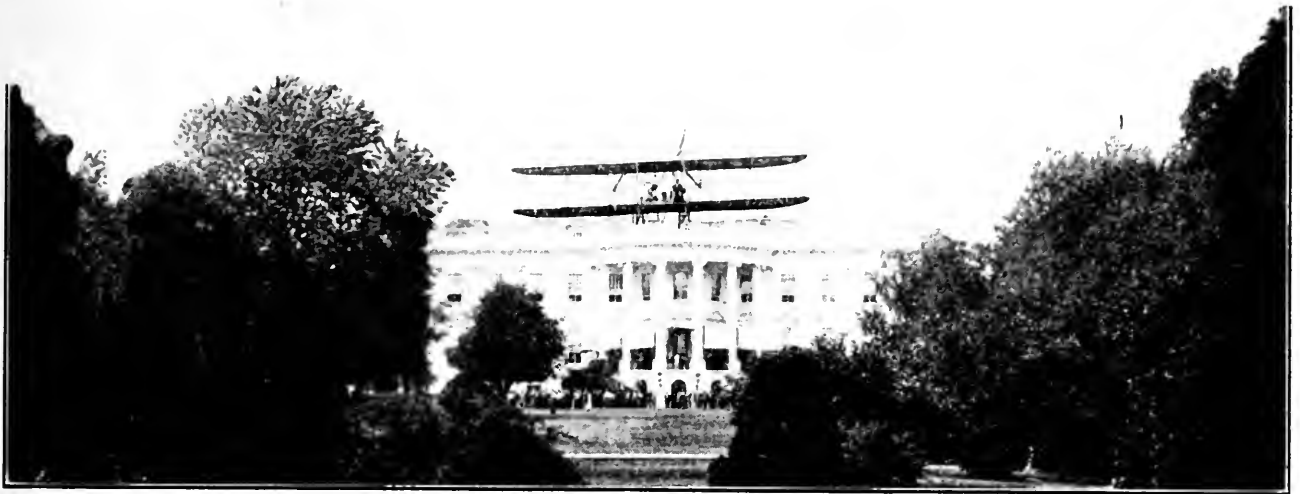
who preside over our industrial life, but in their genius and in their honest thinking.

These men believe that the prosperity of the United States is not safe unless it is in their keeping. If they were dishonest, we might put them out of business by law; since most of them are honest, we can put them out of business only by making it impossible for them to realize their genuine convictions. I am not afraid of a knave. I am not afraid of a rascal. I am afraid of a strong man who is wrong, and whose wrong thinking can be impressed upon other persons by his own force of character and force of speech. If God had only arranged it that all the men who are wrong were rascals, we could put them out of business very easily, because they would give themselves away sooner or later; but God has made our task heavier than that,— he has made some good men who think wrong. We cannot fight them because they are bad, but because they are wrong. We must overcome them by a better force, the genial, the splendid, the permanent force of a better reason.

The reason that America was set up was that she might be different from all the nations of the world in this: that the strong could not put the weak to the wall, that the strong could not prevent the weak from entering the race. America stands for opportunity. America stands for a free field and no favor. America stands for a government responsive to the interests of all. And until America recovers those ideals in practice, she will not have the right to hold her head high again amidst the nations as she used to hold it.

It is like coming out of a stifling cellar into the open where we can breathe again and see the free spaces of the heavens to turn away from such a doleful programme of submission and dependence toward the other plan, the confident purpose for which the people have given their mandate.

Our purpose is the restoration of freedom. We purpose to prevent private monopoly by law, to see to it that the methods by which monopolies have been built up are legally made impossible. We design that the limitations on private enterprise shall be removed, so that the next generation of youngsters, as they come along, will not have to become protégés of benevolent trusts, but will be free to go about making their own lives what they will; so that we shall taste again the full cup, not of charity, but of liberty,— the only wine that ever refreshed and renewed the spirit of a people.



THE BIGGEST JOB ON EARTH

THE PRESIDENCY OF THE UNITED STATES, WHICH CARRIES WITH IT THE RESPONSIBILITY FOR THE PROPER MANAGEMENT OF THE HALF MILLION EMPLOYEES OF THE FEDERAL GOVERNMENT WHO GATHER AND EXPEND A BILLION DOLLARS A YEAR AND WHO CARRY ON ACTIVITIES THAT TOUCH THE LIVES AND POCKET-BOOKS OF ALL AMERICAN CITIZENS

BY

WILLIAM BAYARD HALE

IF EVER mortal man needed supernatural aid, that man is he who is now taking his seat at the head of the greatest governmental machine the world has ever known.

Not that President Wilson will encounter any unique or unusual difficulties; not that he will be beset by any problems which his predecessors have not had to meet. Though in some degree this may be the case, owing to certain political complications, his friends entertain no concern over such probably exaggerated troubles. But simply because the Government over which he comes to preside is an affair of such magnitude; simply because the extent, the size, the importance, the reach, the diversity of the duties of the Presidency have, in the course of our national evolution, become so prodigious; because the White House at Washington has become the centre of a system, an organization, an authority, unprecedented in the history of political institutions — no man could take up the colossal task they impose without fortifying his oath with a devout invocation of superhuman aid, in the words with which Washington, with far less reason, began his terms: "So help me God!"

In 1856, when Woodrow Wilson was born, the United States were thirty-four; to-day they are forty-eight. Then, we possessed no outlying territory. To-day, we have Alaska, Porto Rico, the Panama Canal Zone, the Philippines, Guam, Hawaii, and the Tutuila Islands — more than 3,000 islands. Our population then was 28 millions; now it is 110 millions.

In 1856, the country possessed 22,000 miles of railroads; to-day, 250,000. Then, not a telegraph instrument clicked, not a telephone bell tinkled. That year the people of the United States spent 7 million dollars for postage stamps; this year we shall spend 250 millions — and stamps are cheaper, too.

But, great as has been the growth of the country, the growth in the size and importance of the Government has been out

LEADERS OF 145,000 EMPLOYEES OF THE GOVERNMENT

GENERAL OFFICERS OF THE ARMY (ABOVE) AND OF THE NAVY (BELOW) ON THEIR WAY TO THE WHITE HOUSE FOR THE ANNUAL NEW YEAR'S CALL TO PAY THEIR RESPECTS TO THE PRESIDENT.

THE BROOKLYN NAVY YARD

ONE OF THE STRATEGIC POINTS THAT BUILD AND REPAIR THE SHIPS OF THE NAVY OF THE UNITED STATES, WHICH RANKS ONLY A LITTLE BEHIND GERMANY'S AND WHICH IS THE THIRD LARGEST IN THE WORLD

TABULATING THE RETURNS OF THE NATIONAL CENSUS

FOUR THOUSAND EXTRA EMPLOYEES, AIDED BY WONDERFUL MACHINES THAT AUTOMATICALLY CLASSIFY AND COUNT CENSUS FACTS, WORKED FOR SEVERAL MONTHS IN THIS EMERGENCY BUILDING TO ARRANGE THE BARE STATISTICS OF THE SIZE AND ACTIVITY OF THE AMERICAN NATION

THE PATENT OFFICE

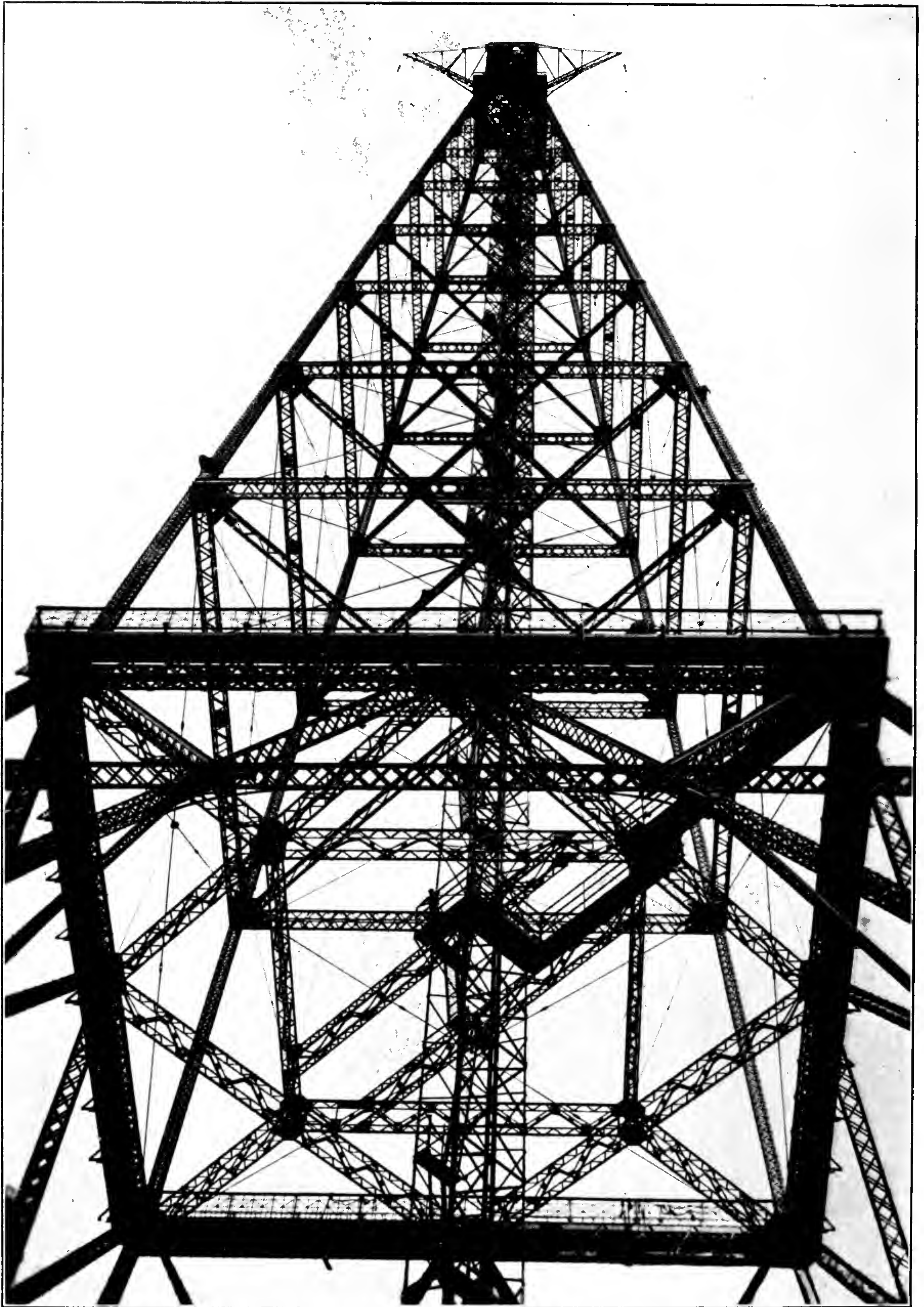
SHOWING SOME OF THE PAPERS OF THE MILLIONS OF PATENT APPLICATIONS THAT ARE THE BASIS OF MUCH OF THE INDUSTRIAL GREATNESS OF THE UNITED STATES

THE NEWEST ACTIVITY OF THE POST OFFICE

THE PARCEL POST, THAT IS ADDING MANY MILLIONS TO THE POST OFFICE DEPARTMENT'S RECEIPTS WHICH ALREADY ARE MORE THAN A QUARTER OF A BILLION DOLLARS A YEAR. THIS DEPARTMENT EMPLOYS 300,000 MEN AND WOMEN, AND HANDLES ONE THIRD OF THE WORLD'S MAIL

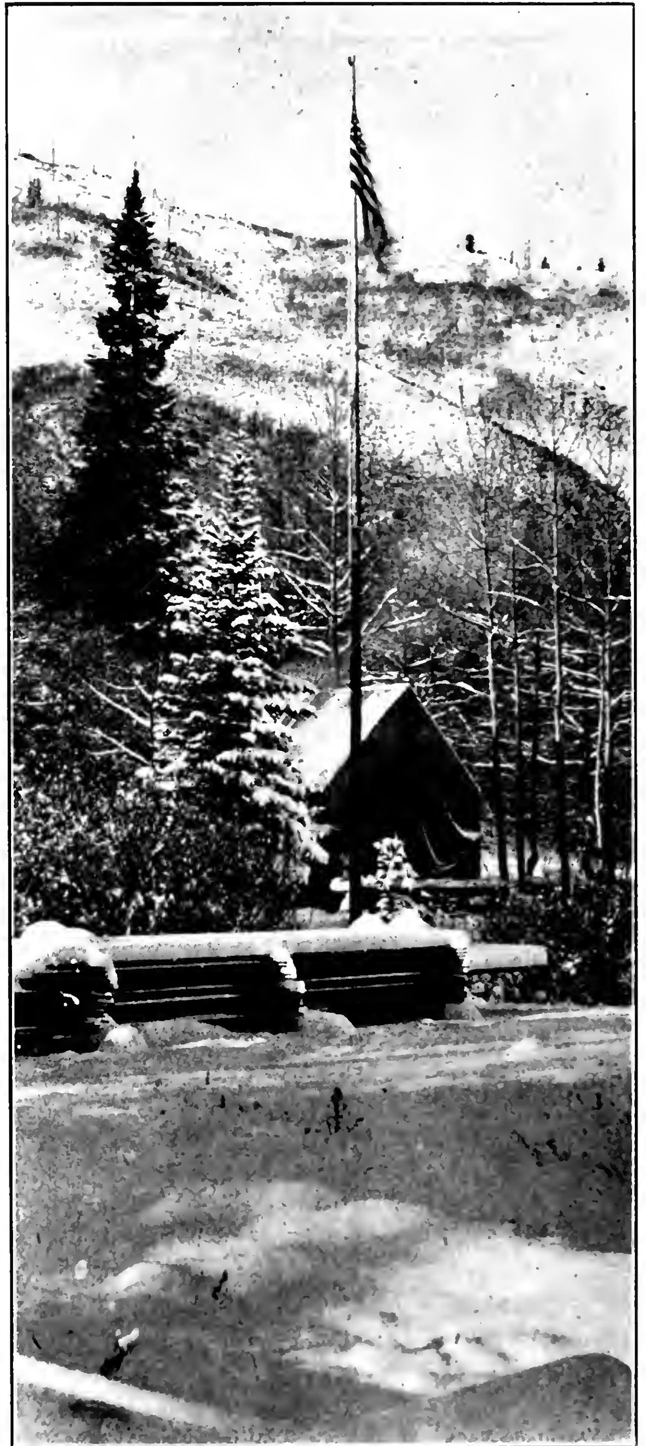
COUNTING THE GOVERNMENT'S MONEY

EVERY BAG CONTAINS 1,000 SILVER DOLLARS. THE VAULTS OF THE NATIONAL TREASURY IN WASHINGTON ALWAYS HOLD MANY MILLIONS IN CASH AND BONDS



THE GOVERNMENT WIRELESS STATION AT ARLINGTON, VA.

THIS STEEL "MAST" IS 700 FEET HIGH AND THE SENDING APPARATUS IS THE MOST POWERFUL IN THE WORLD

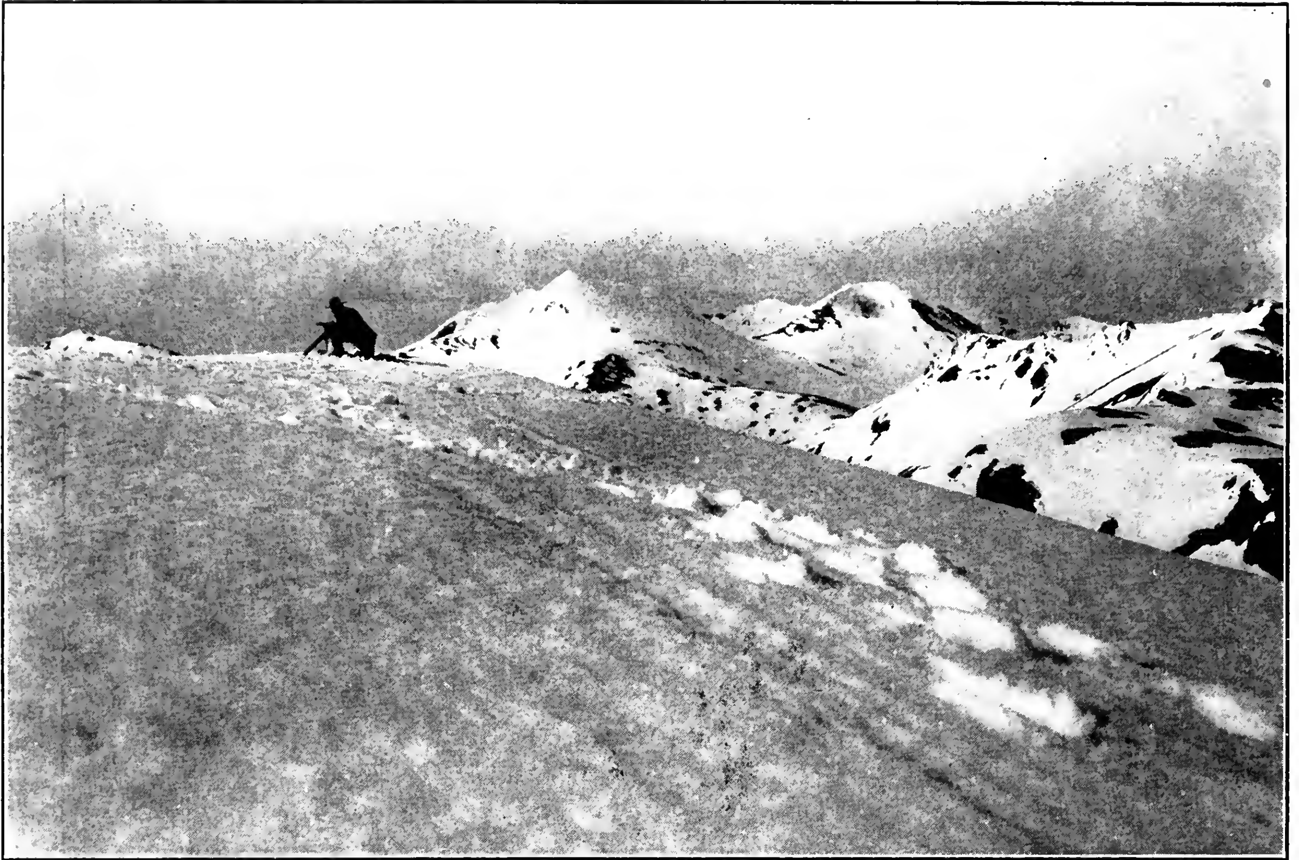


THE GOVERNMENT'S WORK TO SAVE THE FORESTS

A DENUDED GULCH (LEFT) AND A GOVERNMENT PLANTING STATION (RIGHT) FROM WHICH NEW TREES ARE SET OUT TO RESTORE THE FOREST COVER

of all proportion greater. Its functions have multiplied; the scope of its concerns has infinitely widened; the field of its activity inconceivably extended. Whereas, half a century ago — indeed, a generation ago — a citizen was conscious of his connection with the Federal Government seldom except when he went to the post office, voted for a Congressman once every two years, or reflected on the basis of the value of his money, to-day he feels its hand practically every moment of his life — whenever he opens his mouth for food or drink; whenever he boards a train; whenever he makes a purchase, or has reason to prognosticate the weather.

Under Franklin Pierce, an attempt to "classify" the civil service enumerated 722 men and women. Then the total civil establishment of the United States numbered about 25,000 people. Under Woodrow Wilson, the civil service has passed

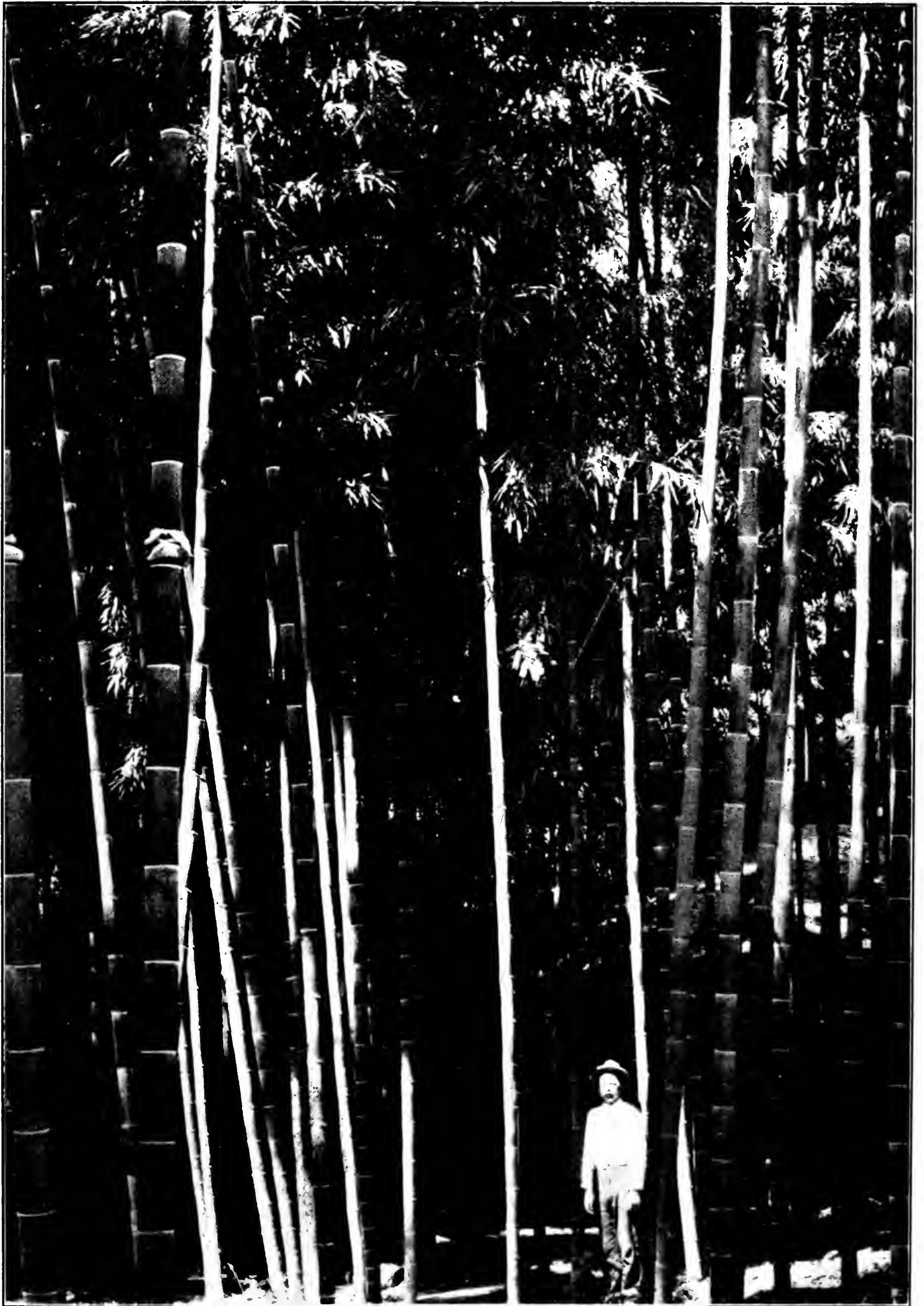


THE WORK OF THE GEOLOGICAL SURVEY

A GOVERNMENT ENGINEER MAKING A MAP IN THE PENINSULAR REGION OF ALASKA

RECLAIMING THE ARID LANDS

THE ROOSEVELT DAM, IN ARIZONA, ERECTED BY THE RECLAMATION SERVICE, WHICH HAS BROUGHT MORE THAN A MILLION ACRES OF DESERT LAND UNDER CULTIVATION



A GOVERNMENT PLANT EXPLORER AT WORK

ONE OF THE CORPS OF MEN WHICH THE DEPARTMENT OF AGRICULTURE SENDS TO ALL PARTS OF THE WORLD TO FIND NEW PLANTS WHOSE CULTIVATION IN THE UNITED STATES WOULD ADD TO THE NATIONAL WEALTH

MAKING FARMERS OF SAVAGES

ONE OF THE 300,000 INDIANS WHOSE LIVES AND PROPERTY ARE DIRECTED AND GUARDED BY THE GOVERNMENT

beyond enumeration; no complete register of it is attempted, but in its last report the Civil Service Commission records 236,061 in the classified service, and counts 395,460 civil employees — not to mention more than 150,000 others whose whole time is not taken by the Government. More than half a million men and women are required to carry on the activities over which President Wilson is chief superintendent — 145,000 more to fill the ranks of the army and navy. The civil salary list under Pierce was twenty millions a year; today it is twenty times twenty millions.

A GOVERNMENT DEVICE TO INCREASE CROPS

ONE OF THE HUNDREDS OF CORN CLUBS COMPOSED OF BOYS WHO RAISE BIG CROPS BECAUSE THEY ARE COACHED IN SCIENTIFIC METHODS BY EXPERTS FROM THE DEPARTMENT OF AGRICULTURE

GUARDING THOSE WHO TRAVEL BY SEA

MEN OF THE UNITED STATES LIFE-SAVING SERVICE RESCUING THE CREW OF A WRECKED SAILING VESSEL

When the present President was in his cradle, the President of the day answered his own letters. To-day the White House staff includes forty secretaries and clerks.

The year in which Woodrow Wilson was born the expenses of the United States Government amounted to $75,647,171. In 1912 its cost was $901,297,979. The receipts of the Government in 1856 were 80 millions; last year they amounted to 970 millions.

Even in the year that Woodrow Wilson attained his majority the Government to a voice in which he then attained was an

BLAZING THE OCEAN TRAILS

A CREW OF THE GOVERNMENT LIGHTHOUSE SERVICE PLACING BUOYS TO MARK THE SHOALS THAT ENDANGER COASTWISE TRAFFIC AND THE ENTRANCES TO HARBORS

affair for which Congress was called on to appropriate only $325,000,000. Last year it appropriated more than a thousand millions. It was only yesterday, only a dozen years ago, that the cry, "a billion dollar Congress," startled the country. Nowadays a Congress spends two billions.

In a single year of his Administration, Woodrow Wilson will sign bills appropriating more money than had been spent by the Government of the United States from the day of its birth to the day of his own. The War of Independence is estimated to have cost the Colonies and France 200 millions. President Wilson will spend that much every two months.

To-day the Treasury Department handles more money than does or ever did any other institution on earth. It prints every day a million dollars in paper money and it collects about two millions a day in customs revenue — not to count the two millions and a half a day collected by the Post Office Department.

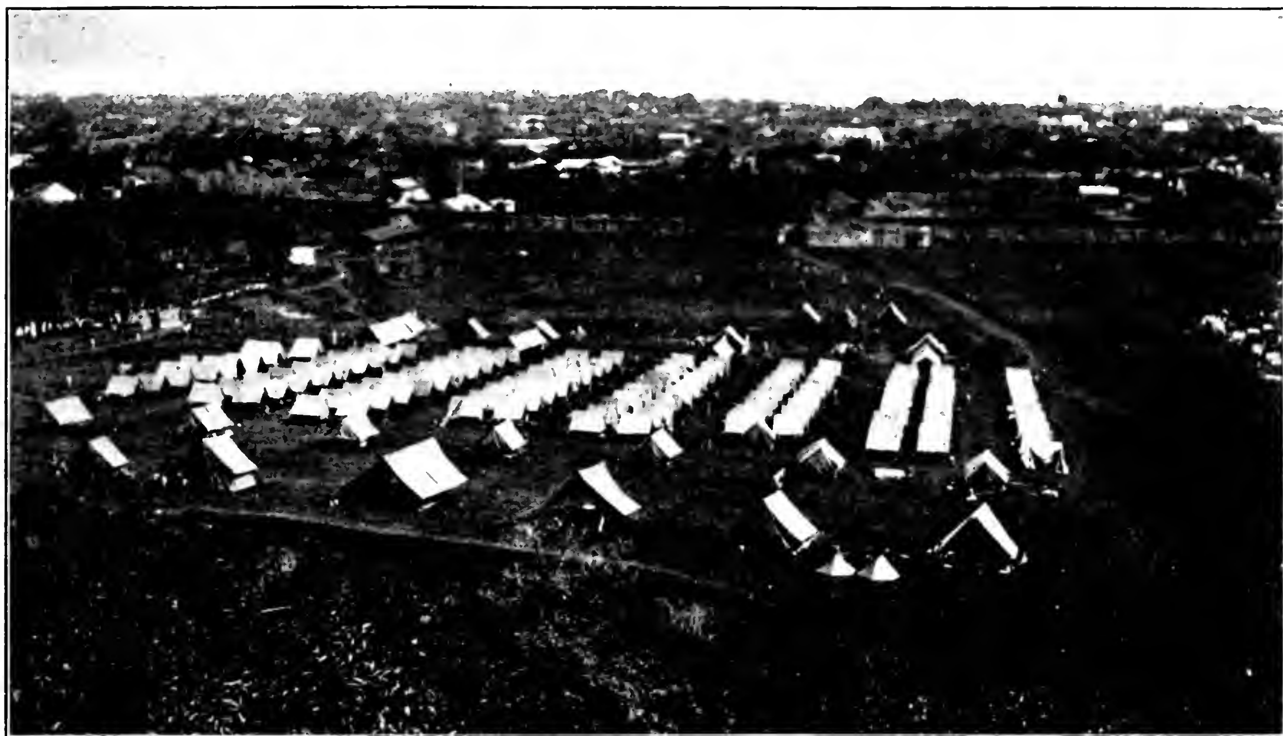
That department, the Post Office, employs 300,000 men and women, and handles one third of the world's mail. This was the case before the establishment of the parcel post, which will add enormously to the work of the department.

A generation ago traffic and travel had no interest for the Government. Nowadays, through the Interstate Commerce Commission, the Government regulates the operation of railroads which carry a hundred million passengers a year, as well as the operation of telephone and telegraph, express, sleeping-car, wireless telegraph, and pipe line companies which anywhere cross state lines. No nation has ever made or dreamed of making such vast alterations in the paths of travel as the United States Government is making in digging the Panama Canal — the greatest engineering work ever undertaken.

WHAT THE GOVERNMENT DOES FOR MINERS

A DEMONSTRATION OF RESCUE WORK UNDER THE TEACHING AND SUPERVISION OF THE BUREAU OF MINES, WHICH HAS GREATLY REDUCED THE HAZARDS OF MINING BY THE INTRODUCTION OF SAFETY DEVICES AND THE ENCOURAGEMENT OF METHODS THAT PROMOTE SAFETY

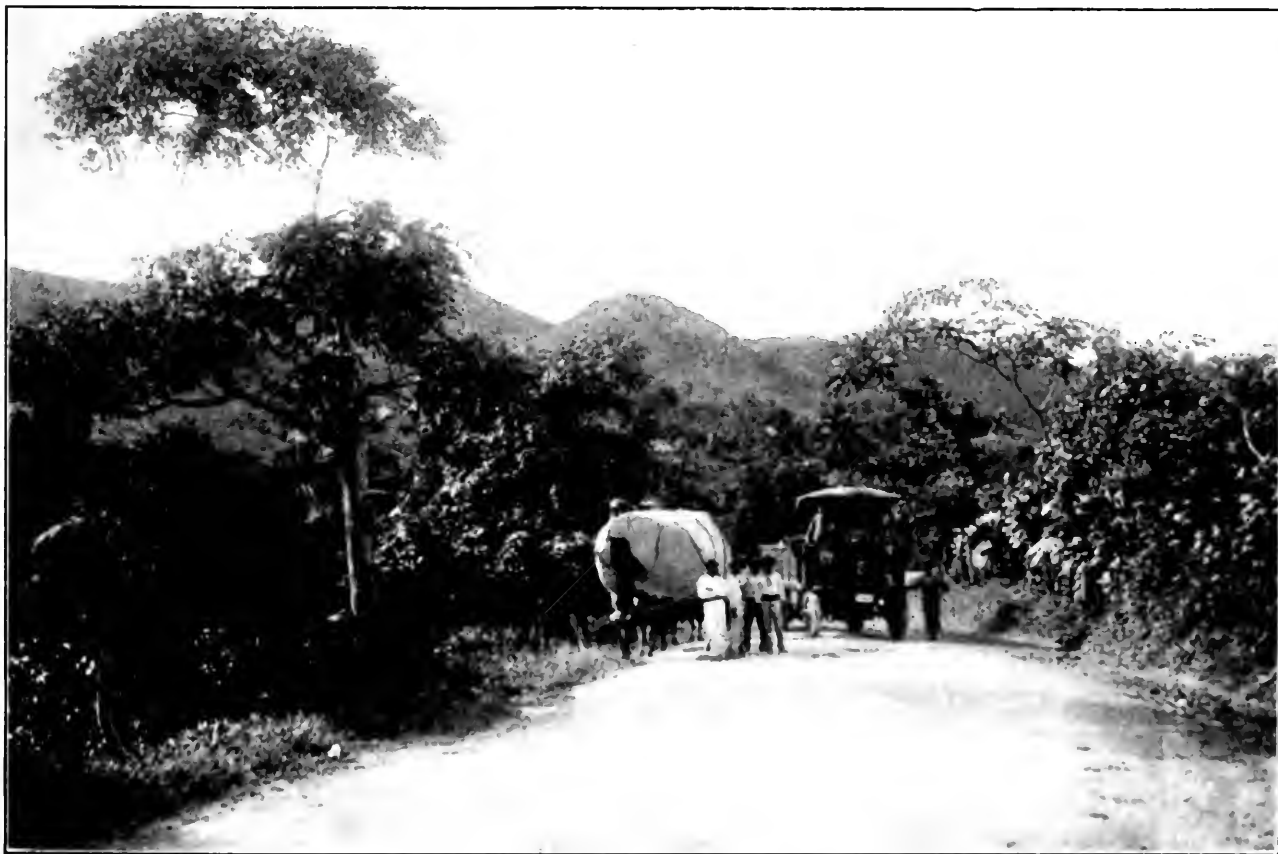
There is a man at Washington, as yet unknown to country-wide fame, though his attainments are well understood by the newspaper profession, who knows more facts about the Government of the United States than any book or any other single brain contains. Mr. William Joseph Showalter is a peripatetic bluebook. He is a living edition of the



PROTECTING AMERICAN CITIZENS IN OTHER LANDS

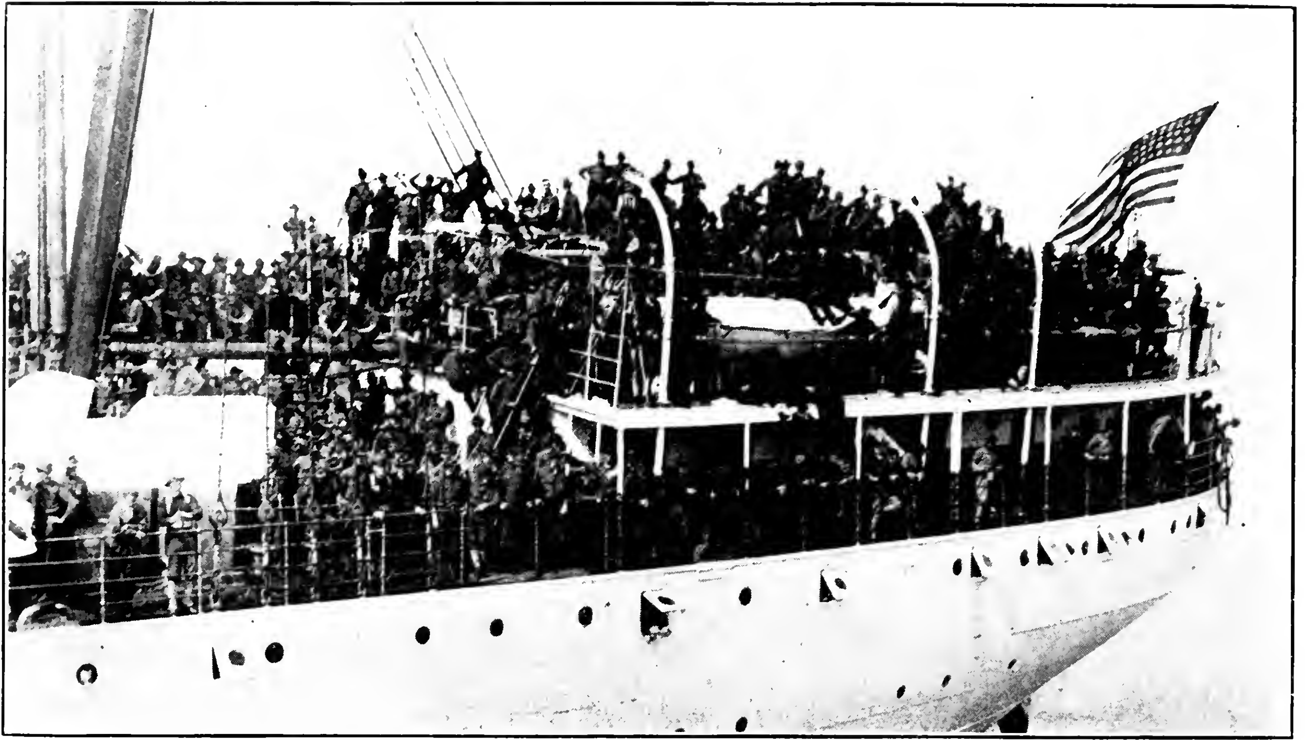
THE CAMP OF A BATTALION OF UNITED STATES MARINES THAT DEFENDED AMERICAN INTERESTS IN NICARAGUA DURING THE RECENT UPRISING

"Statistical Abstract". Not a few of the facts given in this article are from him. Best of all, he has a happy faculty of so stating things that they remain in the mind. Mr. Showalter might be described, in the slang of the day, as the man who put the "stick" in statistics. Mr. Showalter estimates that while it required



GOVERNMENT WORK IN AN INSULAR POSSESSION

ONE OF THE IMPROVED MILITARY ROADS THAT HAVE BEEN BUILT BY THE UNITED STATES AND THAT HAVE OPENED THE BACK COUNTRY OF PORTO RICO TO MODERN CIVILIZATION



SOLDIERS OFF FOR THE PHILIPPINES

TO KEEP THE PEACE IN OUR LARGEST COLONIAL POSSESSION, IN WHICH THE UNITED STATES GOVERNMENT IS SPENDING MILLIONS OF DOLLARS TO EDUCATE BACKWARD PEOPLES AND TO KEEP SANITARY MANILA, WHICH WAS FORMERLY ONE OF THE MOST PESTILENTIAL CITIES OF THE WORLD

100,000 men twenty years to build the pyramid of Cheops, our Government digs every year at Panama a hole big enough to bury fourteen such pyramids in. He calculates that it took the French as many years to discover that they could not build a fifteen-foot canal as it will take the United States to finish a forty-foot canal, and that it cost the French as much to fail as it will cost the United States to succeed.

THE FIRST STEP IN THE MAKING OF NEW CITIZENS

A ROOM IN THE IMMIGRATION STATION AT ELLIS ISLAND, NEW YORK, THROUGH WHICH MORE THAN HALF A MILLION FOREIGNERS ENTER THE UNITED STATES EVERY YEAR, MOST OF THEM TO MAKE THIS COUNTRY THEIR PERMANENT HOME

Almost as great as the achievement at Panama is the work of the Government land reclamation service, which has dug 93,000,000 cubic yards of dirt and has built 7,300 miles of irrigation canals.

President Wilson will have as one of the thousand of his duties the supervision of the greatest publishing business in the world. The Government prints more daily news than does any newspaper, and it puts out more books than any publishing house. It maintains the biggest printing office in the world — its $16,000,000 plant being capable of such feats as printing, before morning, a book of 300 pages, with colored illustrations, copy for which was received after dark. Once in a while it is called on to print such a series as the War of the Rebellion records that runs to 128 volumes and 100,000 pages.

The United States Government, by the way, possesses the greatest collection of books in the Western Hemisphere, housed in the most magnificent library in the world. Including the Congressional Library (which is open to all and not merely to members of Congress), the buildings in which the legislative department of the Government does its work far surpass those occupied by any other national legislature. The buildings on Capitol Hill cost thirty millions of dollars and contain fourteen hundred rooms. When Congress assembles at President Wilson's call, Representatives in Congress will, for the first time, take their seats on benches, the growth of the House having made it impossible to give every Congressman a desk as well as a seat.

The old and familiar duties of the Government have grown enormously; the ordinary and accustomed tasks of the departments have increased tremendously; but it is the tasks newly assumed by the Government that account for this surprising growth in expense and personnel.

To-day the Government scrutinizes the organization and operation of corporations doing interstate business. It has undertaken to safeguard the health of the people. It carries on exhaustive studies and experiments in the war against disease — disease of man, of animals, and of plants. It expends infinite care in searching out the best conditions for the growth of animal and vegetable life. It provides business of every sort with standards of measurement. It supplies citizens with the correct time. It teaches farmers how to grow bigger and better crops.

No government has ever done for the health of a people what the Government of the United States has done and is doing. Of course, it sends a medical man aboard every ship, and it makes a physical examination of every immigrant. But that is little. Biologists and physicians in its employ have been foremost in the discovery of prophylactics and in the improvement of sanitary methods. The

"MAKING" A NATION'S WEATHER

SETTING AN AËROMETER AT A STATION OF THE WEATHER BUREAU, WHICH BY ITS WARNINGS OF APPROACHING STORMS ALONE YEARLY SAVES MILLIONS OF DOLLARS' WORTH OF CROPS AND SHIPPING

CUSTOMS OFFICERS LOOKING FOR SMUGGLED GOODS

THE CUSTOMS SERVICE, WHICH COLLECTS $1,000,000 A DAY, HAS TAKEN IN TEN BILLION DOLLARS ALTOGETHER SINCE THE GOVERNMENT BEGAN

Government has done more than any other single agency toward the bringing into common knowledge of the virtues of preventive medicines and of the possibility of exterminating such common carriers of disease as the malarial mosquito and the typhoid-carrying fly. The work of United States army officers in Cuba, in Panama, and in the Philippines is unsurpassed by any sanitary achievement.

A UNITED STATES MARSHAL AND A CAPTURED ILLICIT WHISKY-STILL

THE COLLECTION OF INTERNAL REVENUE IS THE MOST PROFITABLE WORK OF THE GOVERNMENT. IT AMOUNTS TO 320 MILLION DOLLARS A YEAR AND COSTS VERY LITTLE TO COLLECT

The value of inoculation against typhoid has been demonstrated and impressed upon the Nation by the astonishing success of the treatment given soldiers and blue-jackets. The Government manufactures various serums and viruses, and it furnishes the standard to which all serums, toxins, and so on, must conform, as it does for the heroic remedies, such as digitalis, upon whose exact strength life and death so often hang.

The Government over which Mr. Wilson presides deems it a duty to inspect the meats and to analyze the drugs, drinks, and manufactured food products consumed by the people. It has banished, and by eternal vigilance keeps in banishment, the lying labels on worthless patent medicines and on cans and packages of food impure in quality. Amidst its thousands of important tasks, the Government has time to smoke cigars — the smoking is done by machine — so that it may advise tobacco growers of possible improvement of crops.

Through the Agricultural Department, the United States Government is carrying on works of vast importance, undreamed of a generation ago. The farmer is no longer left to his own devices; in his behalf experiments, investigations, and explorations are tirelessly pursued, with results that have already added many millions of dollars to the annual value of our crops. It studies soils and fertilizers; it maps region after region of fields and forests with respect of their capabilities and requirements. The Government maintains sixty agricultural experiment stations. It conducts farmers' institutes all over the country. It keeps a force in the field giving demonstrations of scientific farming. In its concern for the fruits of the earth, it employs a hundred and forty thousand crop reporters. It explores foreign lands for fruits and vegetables that might flourish here, and introduces them to the farmer. It experiments in cross-breeding, its improvement of standard crops, like wheat, having already added millions to the Nation's wealth. The average yield of wheat used to be ten bushels to the acre. To-day the average is fifteen bushels to the acre. The latest statistical report obtainable shows that a little more than forty-four millions of acres of land in the United States are planted in wheat. An increase of five bushels an acre means a total increase in our wheat crop of 221 million bushels, representing an annual addition to the country's wealth of more than 200 million dollars. Corn used to average twenty-five bushels to the acre. Now the average yield is thirty bushels. Of course, good farmers have little difficulty in attaining a much heavier crop than this average.

The Government wars against the enemies of the trees and the crops, the insects, vermin, and diseases. Every year, animal tuberculosis, the gypsy moth, the brown tail moth, the rat, the Hessian fly, the fever tick, the joint worm, and their allies, do more damage than any possible invasion of a hostile army could do. The Federal Government only can fight these pests — and it is fighting them.

The Government of which President Wilson is the chief is one of the greatest of land owners in its own right; it still holds title to 3 per cent. of the soil of the United States. It is irrigating many regions and opening them to enterprising farmers; it expects before it is done to provide a 40-acre farm for each one of a million families. The Government employs 2,000 rangers to keep watch over 200,000,000 acres of national forests. It is also exploring the sub-soil where mineral deposits might be discovered, and has brought to light great stores of coal, phosphate, oil, etc.

The Government maintains a bureau for the increase and improvement of the fisheries of the country. It distributes free annually more than a thousand millions of eggs and fry of species that ought to flourish in waters where they are now unknown. It investigates the diseases and enemies of the oyster, and has immensely forwarded the culture of this food. Likewise, being no respecter of persons, it has studied the propagation of the diamond-backed terrapin, and of the pearl mussel — as well as of the clam and the sponge. Nothing is too small to interest the Government where there is a chance to serve the well-being of the people. Among its important contribu-

tions have been experiments in the comparative cost and food value of dietary substances and the issuing of bulletins describing methods of cooking the cheaper parts of beef, mutton, and the like. Experts in the federal employ are carrying on a campaign for good roads, studying and recommending the methods of road construction and maintenance best adapted to the several localities.

The Federal Government has taught the making of coal bricks out of culm; it has shown miners how to mine coal more economically and consumers how to burn it with the best results. It has demonstrated the economy of the producer gas engine over the steam engine. The Government is deeply interested in the protection of life and health in the mines. It maintains a number of rescue stations, from which life-saving crews hasten to the scene of catastrophes under ground just as for many years life-savers have rushed to the scene of disasters on the coast. The use of concrete has been vastly forwarded by investigations and demonstrations.

Who knows anything about the work of the Bureau of Standards? Yet this is an institution which touches every one of us constantly and closely. If you will glance at your clinical thermometer before you proceed to take your own temperature, you will notice that its accuracy is certified by the Bureau of Standards. The yard-stick which measures your cloth, the scales which weigh your groceries and your coal, must agree with the standard kept at Washington. The electric clock by which we set our watches is controlled from a master timepiece in its guarded chamber at Washington. The electric light by which we read is paid for on a scale established and maintained at the Bureau of Standards. Incredible delicacy, impossible accuracy, is a commonplace in this laboratory, where experts read indices from a distance because the heat of their body would destroy the necessary normal conditions, where grease from the lightest touch of a finger on a scarcely visible weight would vastly overload it.

Of the half million servants of the Government, by far the larger part come by way of civil service examinations, an arrangement which relieves the Executive of what would be an impossible burden. President Wilson will personally have to appoint about 11,000 officials; about 10,000 of these appointments require confirmation at the hands of the Senate, but this confirmation is rarely more than a formality. In one direction President Wilson's appointive power may possibly not go so far as did that exercised by President Taft. President Taft had the unique privilege of appointing the majority of the Justices of the Supreme Court — five of them. So far as age is concerned, four Supreme Court Justices reach the retiring point within the next four years — Chief-Justice White, Justices Holmes, McKenna, and Lurton — but few have left the supreme bench even at the age of retirement, and death alone could bring it about that the complexion of the Nation's highest court should be determined by President Wilson.

In spite of its great works of peace, against every dollar which it spends in these beneficent directions, the United States Government devotes two dollars for war — past and expected. Every year it pays in pensions to men who have worn the soldier's uniform for ninety days or more, their widows, their children, or those alleged to be dependent upon them, more than enough money to support the British army and almost enough to pay the German army. Those citizens who are economically as well as piously constituted may on their own behalf well add to President Wilson's invocation for divine aid in executing his office their own petition that the Almighty would so dispose his mind and strengthen his arm that he would have courage to inquire into the cowardly farce of the distribution of $200,000,000 a year, almost all of it among alleged living sufferers from a conflict half a century ago.

These are but swift and desultory glimpses at a few of the multiplicate and diverse works in which the Government of the United States is engaged. They can serve only to hint at the weight of the task which Woodrow Wilson now takes up. The Government of the Russian Empire

alone exceeds ours in its expenditures — but (without considering how much Russian money is dishonestly distributed) between the work carried on, the activities annually engaged in, by means of these Russian rubles and the work, the activities, paid for by American dollars, there can be no serious comparison. Compared with the power actually wielded by the President of the United States, that of the Czar of all the Russias is limited indeed. Doubtless the Russian emperor is nominally the more powerful; probably the names of other European rulers are charged with greater power. But, while great things may be done in the name of the European ruler, the actual exercise of power is lodged in ministers and parliaments. By the side of a President of the United States, so far as actual ability to act is concerned, all sovereigns of civilized nations are pigmies and puppets. The President cannot, under the Constitution, declare war, but practically he can make war inevitable. He is commander-in-chief of the army and navy; the German Emperor commands only on Prussian soil.

The President of the United States to-day is second to no sovereign as a force in international affairs. The friendship of our Government is wooed assiduously by the other great Powers; many a startling story could be told of offers sent by European and Asiatic chancellors to Presidents and Secretaries of State. So long as we remain in possession of the Philippines we are necessarily involved in the vastest and most delicate rivalries of the Powers. So long as anarchy is permitted to reign in Latin America we are exposed to dangers from every source of danger. For a long time, the Secretary of State was premier in the Cabinet only formally and not in fact. To-day, the wisest mind at the command of the President is needed in the Foreign Office.

Yet, after all, the more pressing and vastly more extensive tasks of the Government are within our own borders. The fact is, government has become a thing that comes far nearer home to the people, touches them at multiplied points. Life has grown so complicated that it is no longer possible to expect the individual to do for himself what was easy in simpler times. Now, as President Wilson writes on another page of this magazine,

> It is perfectly clear to every man who has any vision of the immediate future, who can forecast any part of it from the indications of the present, that we are just upon the threshold of a time when the systematic life of this country will be sustained, or at least supplemented, at every point by governmental activity.

The task upon which President Wilson has entered is one which might well appall the stoutest heart. The world offers no task that is bigger.

MR. F. W. WOOLWORTH'S STORY

THE FUNDAMENTALS OF HIS GREAT SUCCESS — HOW BUYING FOR CASH AND THE PROPER LOCATIONS OF THE STORES MADE THE FIVE AND TEN CENT STORES SUCCEED — HOW THE GREAT TOWER WAS BUILT

BY

LEO L. REDDING

MR. FRANK W. WOOLWORTH has built a great business and erected the world's greatest office structure on a foundation of kettles and pans, dust brooms, sheet music, knives, paper weights, pens and pencils, and other like minor articles of commerce. He has gathered the nickels and dimes of the country together and with them created a $50,000,000 corporation. Back of this lie two principles of merchandising — the selection of a proper place to sell and the transaction of business on cash alone.

Here is the story, as Mr. Woolworth told it to me:

"I was born on a farm near Rodman, in Jefferson County, New York, in April, 1852. When I was a boy the folks used to say I would be unlucky because I was born on the 13th of the month, but I was never superstitious and gave little thought to their jokes. I lived on the farm until I was nearly twenty-one years old. Then I took my first job and began work as a dry-goods clerk at Watertown, where I remained for six years in a store owned by W. H. Moore and P. R. Smith. It was there that the "five and ten cent" idea came to me, and though I left Watertown without capital I feel that the foundation for my fortune was laid in that little town. I persuaded my employers to create a five cent cash counter with me in charge of it.

"As I watched the public flocking about that counter I became more and more convinced that there was a demand for a store that would cater to the small purchasers, and I made up my mind to give my theory a trial. So, in February, 1879, with a capital of a few hundred dollars, I started my first five cent store in the Arcade Building in Bleecker Street, Utica. This store, of course, was more or less an experiment, and, no doubt, I made many mistakes, but all the time I was gaining experience and learning something. One of the first things I learned was that I could not expect people to come to me. I had to take my store to the people. I had not done that. So after three months I was glad to sell out, particularly as the sale gave me a profit of $150.

"I made my second venture and my real start in Lancaster, Pa., where I opened with a fairly good stock in trade, much of which was advanced to me on credit by Moore and Smith. The first day I sold $128 worth of goods and knew that things were going well with me.

"One month after the opening of the Lancaster store I opened a second store in Harrisburg, installing my brother, C. S. Woolworth, in charge as manager. This establishment did not meet my expectations, and after running it six months I transferred the stock to York. There, again, I failed to do the business I had expected, and at the end of three months, finding my profits to be only $36, I closed the store and shipped the unsold stock back to Lancaster.

"The Lancaster store was prospering all the time. At the end of six months I was able to pay all my debts, and regarded myself as well established in business.

"I was deeply disappointed at the failure of the branch stores and spent much time studying the causes of their lack of success. The trouble was in their location. I had not taken my branch stores to the people who would patronize such establishments.

"Still determined to broaden out, I opened a store in Scranton, in November, 1880. Though I placed my brother in charge, I gave much of my personal attention to this establishment, which was not opened until I had studied the town and found the right spot in the street through which the men and women passed who understood the value of a nickel. The Scranton store prospered from the start.

"That encouraged me, and I turned my attention to Philadelphia. But there I again made the mistake of not studying the situation, and as a result lost $350 in sixty days.

"That wasn't much, but it was enough for me. I do not believe in maintaining losing establishments. Just as soon as a store demonstrates that it is not a success I close it.

"My next venture was in 1882 when, with Mr. S. H. Knox as full partner, I opened a five cent store in Reading. I made sure of the right location, and the store showed a splendid profit from the moment its doors were opened.

"After that I continued to open branch stores just as fast as I could make the money necessary to equip them. I took in several partners and scored few failures. One policy, however, I maintained from the beginning. After I had paid what I owed to my old employers, Mr. Moore and Mr. Smith, I refused to run into debt. If I had wished it, I might have had twenty-five stores working for me, where in 1886 I had only five. I built on a solid foundation. Perhaps I would have made money more rapidly if I had borrowed the capital with which to equip my stores, but I

believe that if I had done that I would have made a failure of my enterprise.

"In July, 1886, I went to New York to open an office — a sort of purchasing agency. I first took desk room at No. 104 Chambers Street, for which I paid $25 a month. I did without a stenographer or assistant. I did all the work myself; bought the supplies and arranged for the shipping of all the goods for my stores in Lancaster, Reading, Harrisburg, Scranton, and Newark. While doing this I was learning, learning all the time, and pretty soon I began to see that I was devoting the time of a high-priced man to details that should have been entrusted to clerks. I was the high-priced man.

"No one ever had more to learn than I, and as I look back on my business experience it seems to me that sometimes I was mighty slow in learning my lessons. I knew that it was necessary to have the right location, if a five and ten cent store was to succeed, yet after various failures I permitted a store to be located in Newark in a part of that city where success was impossible. That store never paid, and after a little time it was transferred to Erie, Pa. There everything went well, and a few months later stores were opened in Buffalo and Lockport, N. Y.

"By that time the five and ten cent field looked so large that Mr. Knox, my partner, desired to enter the field for himself. I sold to him the stores in Erie, Buffalo, and Lockport, and he associated himself with Mr. E. M. Charlton as a partner. They soon opened stores in Fall River and Taunton, Mass. Later on they took the five and ten cent stores to Canada and to the Pacific Coast.

"In the meantime my brother took over the store in Scranton, and later took in Mr. F. M. Kirby as his partner. They opened stores in Wilkes-Barre and then spread west and south so that the field was pretty well occupied.

"We were all doing business on the correct principle, buying goods legitimately, paying cash for them and selling them for cash at a small profit. The result was what it always must be in such circumstances: we all prospered, and though little attention was paid to us for a great many years we were building up a business of wonderful proportions.

"One of the most fortunate moves that I ever made was in opening my first Lancaster store. Any one who can succeed in Lancaster, or particularly any one who could have succeeded in Lancaster at the time I went there, could succeed anywhere. From the American point of view Lancaster a quarter of a century ago was the deadest town in the country, but no panic ever scotched Lancaster.

"During the panic that swept the United States from 1893 to 1896 Lancaster did not know that business conditions were in any manner disturbed.

"Yes, from the American point of view it was a dead town, but from a sane, human point of view Lancaster was the safest town in America.

"Dutch farmers moved into Lancaster and went into business — the safe business that is characteristic of their race. They ran their stores on the same policy for more than half a century; they did not progress, except as a tree progresses in size. They grew wealthy slowly, but surely. They never went into debt; they always paid for what they bought, and paid with cash. They bought at the lowest price, and they bought not a cent's worth more than they actually needed. When they put money in the bank — salted it away — it was put away to stay. There were no liens on anything they owned.

"These Dutch farmers taught me to manage my own business and never to let my business manage me. It was from them that I learned to make the branch stores stand or fall according to their own value. Every town had to support its own store. I never permitted my system of stores to bear burdens that should legitimately fall upon a single store.

"My first establishment in Lancaster was opened in Queen Street. Now Queen Street, like every other street, has two sides and, as often happens, one side of Queen Street was regarded as a far better side than the other. Most of the prosperous stores were on that side. Most of the customers walked on that side. Rents were higher over there. I got a fairly good location on the right side of the

street, right among the crowd, and I had to pay a high rent. The store caught on at the start. The crowd could not get away from that enticing sign —"Five Cents."

"All the time I had my eye on the 'wrong side' of the street, where property was cheap. There was no good reason why that side should play second fiddle, if only it had fair treatment. The sidewalk was just as good, and it caught just as much of God's sunshine as the other side of the street.

"After my general business had become almost immoderately successful I began to have designs on the wrong side of Queen Street. It became an obsession with me. Without saying much to any of my friends I bought enough property on a corner to erect a building that would overshadow everything, not only in Lancaster, but in that part of Pennsylvania. Now, I had been indulging myself in a dream. Lancaster had done much for me, and I intended to do something in return for Lancaster.

"Modern America was growing up all around Lancaster, and it just had to move forward. When my thrifty Dutch friends learned of my plans for a great building, they wagged their heads and assured me that it would never pay. They regarded it as a most daring speculation. One of my oldest and best friends suggested that my mind had given away under the stress of too much work.

"The thing that most pleased me was that the business immediately swung over to what had been the wrong side of the street. The wrong side of Queen Street was now the right side — it was the fashionable side and it was the prosperous side. Things grew so rapidly over there that I had to add to my new building before it was completed. I did that to accommodate a restaurant that the public demanded.

"I was unknown when I first came to New York, and none of the wholesale houses seemed to be particularly anxious to do business with me. They seemed to expect that I would want a long line of credit. On my first visit I bargained for a big bill of goods, and afterward learned that the salesman who served me was roundly berated by the head of his firm for wasting his time. I was called upon to pay for the goods before they were shipped. I was ready for that bluff, and handed to the cashier a certified check for the full amount. After that this same firm tried at various times to press credit upon me, and it was a long time before they learned that I did business on a cash basis.

"Even in those early days I was turning over an immense amount of goods, and as time passed the volume of business multiplied, and simply because I continued to do business on a cash basis no one but myself had any adequate idea how the five cent store was prospering.

"No longer ago than 1911, and even after several New York bankers were trying to bring about a consolidation of all the five and ten cent stores, nothing was known of our methods. At that time I was much amused by some auditors who had been engaged to investigate the affairs of the Woolworth stores. They asked to see my office force. I pointed out a bookkeeper and his assistant and a few stenographers.

" 'What!' said one of these auditors. 'You don't mean to say that you do a business that runs into millions with a force like that?'

" 'Yes, sir,' said I. 'That is my business force.'

" 'Show us your bills receivable,' said one of the auditors.

" 'I have none,' was my reply. They were amazed.

" 'Bills payable?'

" 'None,' I said. 'I have no bills payable or receivable.'

" 'Good Lord!' ejaculated the man who was asking the questions. 'What kind of a business is this? Let us see your January receipts.'

"It took three men to carry in a case full of the returns. The auditors fairly gasped.

" 'You did all of that in January!' they exclaimed.

" 'Why, that is not all,' I said. "We will have the other boxes brought in in a few minutes.'

" 'Never mind!' was the reply, and they all fled, shaking their heads. The last I heard was one of them saying as he went

out, 'There must be something wrong with a business of that size that doesn't owe anything.'

"However, the report of those auditors made the capitalists all the more willing to do business with us.

"In the proposed combination were Mr. Kirby, Mr. Knox, Mr. Charlton, my brother, Mr. C. S. Woolworth, and myself, besides a few owners of stores of less importance. When I first suggested to Mr. Knox and Mr. Kirby that it might be a good idea to consolidate all the five and ten cent interests, they could not see the advantage. They were all doing well enough. It had been an unwritten law with us, and one that was never violated, that we should not invade one another's territory. The country was big enough. We kept apart and prospered, and so they could not see what advantage there would be to them in a consolidation. I attempted to explain that our heirs — and we must all have heirs sooner or later — would have no fixed valuation upon which to base our holdings. They saw my point and it was not long before we were all in conference in the Waldorf-Astoria Hotel in New York. Our first hitch came over the capitalization.

"I was opposed to any suggestion of water in the stock; refused to consent to a capitalization of $100,000,000, and suggested that we call in some bankers to fix valuations. The others thought that we could run things better without any outside interference. We went back and forth, and finally it was decided to make it a $50,000,000 corporation, based on business done in 1910, which, by the way, had reached that amount.

"In the meantime I had been sounding bankers and some of the downtown financial leaders. Several big banking houses knew enough of the business we were doing to be anxious to get hold of the preferred stock. Goldman Sachs & Co. were among the keenest. Mr. Pierson, president of the Irving National Bank, a warm personal and business friend of mine, thought that the new corporation should be floated by Mr. J. P. Morgan.

"I told Mr. Pierson that Mr. Morgan would not look at our five and ten cent business. Mr. Pierson thought otherwise, however, and with my consent called on one of Mr. Morgan's partners, asking him if Mr. Morgan would be interested in a new industrial.

"'Mr. Morgan would not be interested in an industrial; but what is it?'

"Mr. Pierson briefly outlined the plan for the consolidation of the five and ten cent interests of the country. Mr. Morgan's partner laughed.

"'Well,' said Mr. Pierson, 'if you will meet me at luncheon to-morrow I will tell you something about the five and ten cent business that will astonish you.'

"Mr. Morgan's partner was too busy. Several days later, however, he caught the scent. He called Mr. Pierson by telephone and attempted to make a dinner engagement, telling him that Mr. Morgan might be interested in the industrial after all. Mr. Pierson came to me, but by that time I had practically promised Goldman Sachs & Co. that they might have the first option. That is how Mr. Morgan failed to float our securities and Goldman Sachs & Co. took it up.

"Much has been said about the Woolworth Building, and though that structure had been taking form in my mind for a great many years, and though it is, as I have said, the result of one of my day dreams, I must in all honesty admit that it did not exactly originate with me.

"While in Europe a few years ago, wherever I went the men with whom I came in contact asked me about the Singer Building and its famous tower. That gave me an idea. I decided to erect a building that would advertise the Woolworth five and ten cent stores all over the world. I kept thinking about it, and finally, when the opportunity seemed to be right, I went ahead with my plans."

Mr. Woolworth did not wish to speak at greater length about the Woolworth Building and the manner in which it was brought into existence, but from another source I heard its story.

In 1910, the Irving National Bank, of which Mr. Pierson is president and in which Mr. Woolworth is interested, desired to strengthen its position. Negotiations were entered into looking to the absorption of the New York Exchange Bank which

was, in a sense, its competitor for business. The deal see-sawed back and forth until one day Mr. Pierson went to his friend Mr. Woolworth, much dejected because he feared that the consolidation of the two banks could not be brought about.

"What is the matter?" was Mr. Woolworth's quiet inquiry. One who was present at this conference says that Mr. Woolworth at the time reminded him of a countryman sitting on a cracker barrel in a cross-roads store, whittling and talking neighborhood gossip.

"What is the matter?" he inquired in the softest, most matter-of-fact manner.

"Why," said Mr. Pierson, "one of the largest stockholders of the Irving National fears that we are not strong enough to shoulder more than we are now carrying. This consolidation startles him."

"Well, now," said Mr. Woolworth, "I don't blame him much. I know his kind very well. Lancaster is full of just such men. Probably that fellow is all right, he just needs someone to put a little strength into his spine."

Mr. Woolworth for years has made "situations" serve purposes of his own. As he talked with Mr. Pierson the Singer Building tower was in his mind's eye. After telling Mr. Pierson that he would consider the matter and see him later about it, he went out into the street and began walking up and down Broadway. He looked at the crowds, watched them as they turned into side streets, and saw where the traffic was the most dense.

Mr. Woolworth noticed they were tearing down the old Tweed office building at the corner of Broadway and Reade Street. Then he walked on and, after standing for half an hour watching the crowds turn from Broadway into Park Place, called up a real estate dealer and found that he could buy the corner plot, 75 feet by 125 feet, for about $750,000. He directed his real estate broker to obtain an option, returned to Mr. Pierson's office, and told the banker that he would take the additional stock necessary to make the consolidation of the two banks a success if the bank would move up to Broadway and take quarters in a building that he proposed to erect at the corner of Park Place.

That sounded good to Mr. Pierson, and the details were quickly arranged. Mr. Woolworth proposed that the bank should carry a mortgage for $1,000,000 on the new building; he would furnish the remaining $500,000. The building was to cost $1,500,000.

The deal was taken up by the board of directors of the bank. Now Mr. Woolworth doesn't believe much in boards of directors. In his opinion they always complicate matters and kill more good business deals than they put through.

The board of directors of the bank was grave, exceedingly grave. Some of its members were timid. The mathematician figured that if the bank moved up to Broadway it would lose about a million dollars in deposits from those who did business on the West Side. Mr. Woolworth figured the bank would gain about two million dollars in deposits by moving to Broadway.

Meanwhile he moved right ahead with the plans for his new building. He obtained an option on a small piece of property adjoining that which first came under his control, and then tried to purchase the second Broadway corner of the plot, fronting on Barclay Street. The owners of that corner demanded $1,500,000 for it. Mr. Woolworth refused to pay the price. A little later he added a third piece of real estate to his holdings, a bit of ground that fronted on Barclay Street, and in this manner isolated the corner.

Mr. Cass Gilbert was employed to prepare the architectural drawings. While these deals were being made the Metropolitan Tower had been run into the air, overtopping the Singer Building. Mr. Woolworth, determined to have the advertising value that would come with the highest structure in Manhattan, hired an engineer to measure the Metropolitan Tower. He reported that it was exactly 701 feet 3 inches high. Mr. Woolworth instructed his architect to prepare plans for a tower that would overtop the Metropolitan.

The United States Steel Corporation wanted the advertising that would result from the Woolworth Building. It bid to furnish the completed steel structure at a price that was astonishingly low. The entire transaction was carried through on

a mere letter of a few words, written by Judge Gary, chairman of the board of directors of that corporation. Mr. Woolworth says that his building is the cheapest big building of its character ever erected in New York City. Competent engineers say, too, that it is the most substantially built structure of modern time. Had a hard and fast contract been drawn, it is quite probable that the Woolworth Building would have cost much more than it did. Its steel work is based upon a "gentlemen's agreement."

Meanwhile the directorate of the Irving National Bank was afraid to take the chance that was offered by Mr. Woolworth. The bank would shoulder $500,000 of the burden, but no more. With his usual cheerfulness Mr. Woolworth picked up the other $500,000 and added it to what he had taken on before.

Just about this time the owners of the lower Broadway corner met Mr. Woolworth's figures, and so the architect was compelled to reconstruct all his plans. The tower, which was to have been erected at the Park Place corner, and for which a foundation had been built 125 feet into the ground, was shifted to the centre of the Broadway frontage.

"How high do you want the tower now?" asked Mr. Gilbert.

"How high can you make it?" Mr. Woolworth asked in reply.

"It is for you to make the limit," said Mr. Gilbert.

"Then make it fifty feet higher than the Metropolitan Tower."

Mr. Gilbert ordered the foundations that had been set for the centre of the building to be drilled out, shafts were sunk far deeper into the ground, heavier foundations were put in, and the Woolworth Building to-day stands fifty feet higher than any other building in the world. Thus another of Mr. Woolworth's dreams has come true.

A FARM REVOLUTION THAT BEGAN IN A GREENHOUSE

MR. J. J. HILL'S CONSERVATORY, TURNED INTO A LABORATORY AND SOILS EXPERIMENT PLANT, BRINGING ABOUT A NEW EPOCH IN PRACTICAL FARM METHODS IN THE NORTHWEST

BY

JOSEPH GILPIN PYLE

A LARGE, completely equipped laboratory for soil analysis and pot culture is housed in the conservatories of a private home in St. Paul, Minn. It contains all necessary apparatus for making a chemical study of the farm soils of the Northwest, to determine what treatment, if any, they need to raise them to maximum productivity; and 1,200 metal pots filled with experimental plant growth, by which these analyses may be verified or corrected. This modern plant is a concrete answer to the demand for a more intimate application of scientific methods to the farm.

The Great Northern Railway Company began some time ago to plan practical measures for the improvement of agriculture in the Northwest. No agricultural college or experiment station within reach was equipped for such comprehensive investigations as it desired to make. The facilities of the Wisconsin Agricultural School are near enough to be available, but the work could not have been done there in time to apply its results to the coming season's crops. To avoid delay, Mr. James J. Hill placed the greenhouses of his residence at the service of the company's agricultural extension department. In them have been under way, for months

past, experiments that promise to yield information of the greatest practical importance in the application of scientifically ascertained facts to ordinary farm work by the farmer himself.

In the spring of 1912 a tract of five acres was selected on every one of 151 farms in Minnesota and North Dakota. Mr. F. R. Crane, who, after nine years at the head of the Agricultural Engineering Department of the University of Illinois, and three years as superintendent of the Special Agricultural School at Menominee, Wis., had engaged in extension work in connection with the latter school and with the University of Wisconsin, was put in charge. The owner of the land in every case agreed to plow, plant, and cultivate the five acres exactly as he was directed. Selected seed was supplied to him. He received the product of these acres as his own, and was paid eight dollars an acre additional for his labor. If he had enough barnyard manure available to fertilize this tract properly, that alone was used. If not, such commercial fertilizer as would best meet the soil's needs was furnished with instructions for applying it, and the cost of this was deducted from the allowance of eight dollars an acre. During the season the work was supervised frequently by the agricultural expert and his assistants. The record for 1912, the first year of experiment, with no laboratory work as a guide, is now made up.

The only fair comparison is between the yield of different grains on these five-acre plots and the average yield for the states in which the experiments were made. Every farmer was consciously or unconsciously influenced somewhat by the prescribed method of cultivating the demonstration acres. He would plow the rest of his fields a little deeper and cultivate them a little more carefully than he would if he did not foresee a coming comparison between them and this plot. The contrast between the average product of the area under the new methods and that of the total state acreage sown to the same cereals shows the actual gain and measures the improvement that was made. Here is the record for the first season's administration, the latest estimates from reliable sources being used for the average state yields in 1912:

COMPARISON OF AVERAGE YIELD ON GREAT NORTHERN PLOTS AND ON ORDINARY FARMS

MINNESOTA

	Great Northern Plot	Average for the State
Wheat	29 bushels	15 bushels
Barley	44 "	28 "
Oats	70 "	41 "

NORTH DAKOTA

	Great Northern Plot	Average for the State
Wheat	31 bushels	18 bushels
Barley	50 "	29 "
Oats	73 "	41 "

MINNESOTA AND NORTH DAKOTA COMBINED

	Great Northern Plot	Average for Two States
Wheat	30 bushels	16 bushels
Barley	47 "	28 "
Oats	71 "	41 "

Quality gained as well as quantity. The grain raised by the improved method is larger, plumper, and heavier. In several cases the wheat from the plots graded No. 1 though that from the rest of the farm graded No. 2; and the barley sold for from three to six cents above the market. The processes by which such gains were realized are already familiar to advanced members of the modern agricultural movement. They have not been applied before in this country on so large a scale. The comparative system of checking laboratory and field work by pot culture, presently to be described, balances the scientific method and makes its findings accurate and specific. Probably the best phase of all is the preparation to attack the farmer's indifference with his own weapons and in his own stronghold.

The plots were selected in March and April of last year. The best seed obtainable was purchased and delivered to the farmers, with a formaldehyde solution and directions for smut treatment. A commercial fertilizer in concentrated form, consisting of acid-phosphate, nitrate of soda, and muriate of potash, separately used or mixed in the proportions thought to be indicated by such soil inspection as was possible without chemical analysis, was purchased and sent to the farmer. In the preparation of the land he was asked this year to do a larger amount of labor

than will ordinarily be required. The ground had to be spring plowed, worked down, and packed to make a good seed bed. The cost of the work for the first season was consequently above the average.

In the absence of soil analysis as a guide, all three fertilizing elements, phosphorus, nitrogen, and potash, were supplied, so that the soil would get without fail what it needed. An excessive amount was used, so that not more than one third of the fertilizer applied would be assimilated by growing plants the first year. The remainder, held in the soil, will serve the needs of future crops. The fertilizer cost less than $6 an acre, of which $2 may fairly be assigned to this year's cost of production. The cost of the more careful cultivation cannot be stated in exact figures. It varied with different soils and with different farmers; some farmers were already accustomed to put much more labor on their land than others.

The average additional yield of wheat per acre secured in the two states, at 70 cents a bushel — which is a fair average price this year at the elevator in Minnesota and North Dakota — was worth $9.63. A large net cash profit per acre over all extra expenses appeals powerfully to the farmer. When he sees that it has been made on this small tract, and that he can get it from every acre of his holding merely by a change of method already made familiar, then the revolution in farm practice becomes imminent and automatic.

The first step is soil diagnosis. The soil must be prescribed for just as the physician prescribes for his patient, only after careful physical and chemical examinations to fix the nature and progress of the ailment. To determine the quality, and therefore the needs, of every individual soil, by physical and chemical methods, employing these methods independently as a check upon each other, is the first duty of the agricultural expert. Chemical analysis will not tell how much fertilizer, for instance, is needed; but it will show in which elements a soil is weak and in which it is strong. It reveals many secrets helpful to the cultivator. Such work for the Northwest is now well under way.

The laboratory was opened September 15, 1912. On November 10th, chemical determinations were begun. Rooms have been provided for chemical analytic experiments, fitted with the best appliances and apparatus. Nine thousand square feet is now under glass for the growing of wheat, barley, oats, rye, and other grains in pots; and as much more space as may be needed is available. One can understand most clearly what is going forward, and what results are sought by following a soil specimen in its course through the laboratory.

After a farm plot has been selected for cultivation, a man is sent to bring in enough of its soil for chemical analysis and pot culture. Ten cores are taken with a soil auger from different parts of the field, half of them from the surface to eight inches in depth and half from a depth of eight to twenty-four inches. For the pot cultures, from 150 to 200 pounds of one surface layer are used. The samples are all numbered, to identify the plots to which they belong, and are then forwarded to the laboratory.

For pot culture, the soil is thoroughly mixed and air-dried. Exactly 25 pounds of it are weighed out into each of six galvanized iron jars ten inches high and twelve inches in diameter. The soil of the first of the six is left in its natural condition. The soil in the other five is treated with fertilizing material of different kinds or combinations: the second jar being for nitrogen, the third for phosphorous, the fourth for potash, the fifth for nitrogen, phosphorous, and potash combined, and the sixth for nitrogen and phosphorous. There are in all twelve hundred educative culture pots full of growing grain in the greenhouse. The fertilizers are used in the form of stock solutions made from pure salts, so that every 10 cubic centimetres shall contain $1\frac{1}{2}$ grammes of fertilizer. These solutions are diluted and mingled as the circumstances of each case seem to require. All are applied to the earth when the young plants are from two to three inches high.

For these pot cultures wheat, barley, or oats is planted according to the test desired. Thirty seeds — selected for their uniformity after the grain from which they

are taken has passed the test for germination — are planted in each pot. When the plants are two or three inches high they are thinned down to twenty. In watering, the same amount of moisture is applied to each set, only an average quantity being used, so that field conditions may be approximated. For this season, the characteristics of each soil, so far as the pot culture testimony goes, will be gauged principally from the number, size, strength, color, and other characteristics of these plants growing in their jars. At maturity the crops grown in the pots will be gathered, put in bags, and weighed; and the product of every one of the fertilized soils will be compared with the product of the pot containing the untreated soil. This will be almost finally determinative of the kind and amount of fertilizer needed to produce the best results on that tract.

One need not be a chemist or expert of any kind to pick out the banner jar of every group of six, by comparing its crop with that of any of the others; especially with number one, containing the unfertilized soil. By contrasting number one, again, with any of the others, the almost universal need of some fertilizing is demonstrated. As a rule the soils of the Northwest have an adequate supply of nitrogen. Their potash content is deficient mostly where straw has been burned for years, but this is in the surface soil only. The subsoil usually has a normal supply. But the phosphorus content is low; and their chemical improvement must consist mainly for some time in restoring and reinforcing this element.

The second and coördinate branch of this laboratory work is chemical analysis of the soils themselves. The sample of earth, including both surface and subsoil from each farm, is pulverized in a mortar, the stone and gravel content is weighed and noted, and the remainder is ground down until it passes first through a 20-mesh and then through a 100-mesh sieve. From this point the process becomes technical, following the best known methods of determining the percentage of phosphorus, potash, and nitrogen contained in the soil. Kjebold's method is used for nitrogen, J. Lawrence Smith's for potash, and the new volumetric method devised by Mr. Truog for phosphorus. Veitch methods are also tried, to ascertain whether a soil needs lime, and if so how much. The processes employed are all the latest and best that have scientific indorsement.

The fundamental and especially original phase of the whole undertaking is the correlation upon such a comprehensive commercial scale of chemical analysis and pot culture. The pot culture, for example, generally shows that the Northwestern soils lack phosphorus. But this is indefinite; since the trouble may be either an absolute insufficiency or only a deficiency of phosphorus in form available for plant growth. Chemical analysis will decide. Then the agronomist knows exactly what to do and how to do it in the case of every soil that has been examined. By checking one test against another, error is eliminated and exact and dependable conclusions are reached.

Correct fertilization is crucial. On this point the farmer is nearly always inexperienced and always prejudiced. Accustomed to a rich virgin soil, it is hard for him to realize, even in the face of falling production, that it will deteriorate unless the exhaustion from cropping is made good by fertilizing. In the last census year the farmers of Minnesota and North Dakota spent $44,000,000 for labor and only $261,000 for fertilizer. Even this ridiculous sum was a decrease of 28 per cent. for one state and 70 per cent. for the other from the total reported ten years before. What to use, how much to use, where to use it, without soil starvation on the one hand or waste of money upon commercial fertilizers of doubtful value on the other, are all important questions. Those in charge of this demonstration work have set out to answer them with scientific accuracy. It is even more difficult to convince the farmer that it will profit him to pay out cash for fertilizer than it is to induce him to adopt modern methods of cultivation. It is as easy for him to throw money away by buying the wrong material as by letting his farm machinery stand exposed to the weather all the year around.

Barnyard manure is the best fertilizer

that can be applied to any soil. So far as that is available, the question settled itself uncounted centuries ago. But there is nowhere near enough to go around. There is not now, and there will not be until stock raising is greatly increased, enough barnyard manure in the Northwest to maintain the land at a high level of productivity as the term is understood in the light of possibilities now disclosed. One ultimate aim of the improved agriculture must be to bring about conditions that will insure an adequate supply of it. The use of commercial fertilizer is really a stop-gap, to serve until a new order of cultivation shall be established, in which the farmer will utilize a smaller area of his land for wheat, grow more of the coarser grains and forage plants, and use these as feed for cattle and hogs. This is recognized, in every country where agriculture has made great progress, as an indispensable condition to the highest success.

If, for example, the farmer of the Northwest were to increase his wheat crop from 80 to 90 per cent., as has been proved possible, using the same acreage, it would so affect the market price that his theoretical profit would be greatly reduced. If all the farmers of the country were to do this, the profit might vanish altogether. An intelligent direction of industry will not only prevent this but will realize the full gain from increased production under the better methods. By growing more grain to be fed to live stock, all the new output may be disposed of in a market that has been constantly advancing.

Live stock prices have been mounting and show no sign of a fall. There are 14,000,000 fewer cattle other than milch cows in the United States than there were in 1907. The deficiency in the hog supply is reflected in the present prices of pork and bacon. Not so many years ago the farmer sold his steers at from 5 to 5½ cents and made money at it. With fat steers at from 9 to 12 cents in Chicago, no use of the farm in general can be more profitable than taking from it its maximum of grain suitable for feed, and converting this into meat products. That is the goal of better agriculture in this country. That is the experience of Denmark and those other countries in which the greatest agricultural advance has taken place. One third of all the product fed to stock is returned to the soil in the form of manure. The lesson intended to be taught by the fertilization of these demonstration farms is as much the necessity of growing live stock as it is to increase the crop yields. The whole process looks forward to the time when better farm practice will make the purchase of any kind of commercial fertilizer unnecessary.

Meantime, the object lesson must be adapted to conditions as they are. The continued application of a strictly commercial fertilizer without the use of some green manure would ultimately despoil the soil of humus and make it unproductive. The application of a fertilizer altogether or largely composed of one or more of the fertilizing elements in which the soil is already sufficiently rich would be a positive waste, if not actually injurious. It is essential that the farmer should be taught for the time being both what not to purchase as a fertilizer and what can be applied with the best economic results.

In every case an effort is made to get all the data possible to accompany the soil sample. The location of the plot, absolute and relative, and its soil history, so far as that can be gathered, are carefully noted. The number of years it has been cropped, what has been grown on it, the yields obtained, how much fertilizer has been put on, the nature and effectiveness of the drainage, the character of the subsoil — all circumstances that can throw any light upon the performance and intrinsic quality of each soil are combined in its individual health chart. Not only do these details supply a broad basis for necessary generalizations, but if the results of the pot culture and of the chemical analysis fail to corroborate each other in any instance, the soil history will probably reconcile them by furnishing a sufficient explanation of the discrepancy.

This is a long step toward the emancipation of agriculture from the "rule of thumb" method and planting "according to the moon." Soil analysis and expert advice for the farmer are not in themselves

new ideas. They are familiar in those countries of Europe whose agriculture stands at the front. In the United States there is enough information buried and lost in libraries, in bulletins and other publications of the Federal and state governments, and in scientific monographs, known only to a specialist here and there, to revolutionize farming if it could be got in concentrated shape to the man on the land, and if he could be brought to use it himself. Such knowledge, practically employed in the field, would go far to elevate agriculture to the rank of an industry as truly subservient and responsive to the laws of exact science as is metallurgy or synthetic chemistry. Good agriculture is essentially this very thing; the manufacture of organic chemical compounds from scientifically selected raw materials provided by Nature, following definite processes, under the operation of the mysterious force we call life. The power supply is free and universal. The raw materials are furnished lavishly in Nature's storehouses. We are a lot of poor creatures, unworthy of that daily bread for which we pray, if we cannot or do not learn to put the materials together in the proportions and under the conditions which Nature herself has written in that book whose pages have been open for human inspection through thousands of years.

The work being done in the Northwest is still in its infancy. It is part of the plan to select new farms each year for investigation and experiment, so as to diffuse the benefit of the instruction as widely as possible. This year, 387 farms will be in operation. One of these demonstration plots scatters other seed than that produced by its plants. The farmer who has cultivated it and gathered its crop himself, who has compared its yield under his own eyes and by the work of his own hands with that of the rest of his farm, is in a hurry to treat his entire holding in the same way. Mr. Joseph Ackerman, of Reynolds, N. D., says that in view of the largely increased yields from his demonstration plot he purposes to fertilize eighty acres this season. Just as rapidly as the farmers can secure the necessary fertilizer and perform the extra work they will adopt the new farm methods. This goes to the root of the whole proposition; which is not to set abstract ideas before the farmer nor repeat to him principles out of books, but to induce him to *do* things — the right things in the right way — for himself. The change will make itself known before many years through both the total crop returns and the average yield per acre of these Northwestern states. It will also appear in the increased value of farm lands so handled. It is moderate to estimate this, in view of the new yields obtained, at from $10 to $25 per acre. Here are three of the many letters received from men on whose farms demonstration work was done last season:

> I threshed the grain on my plot and it yielded 35⅕ bushels to the acre. The wheat field adjoining yielded 25 bushels per acre. Deducting for fertilizer it still leaves a profit of $5 per acre above that on the adjoining field. Under such circumstances I could not very well help but be satisfied.
>
> F. Fahlstrand
>
> Herman, Minn., Aug. 27, 1912.

> I can truly say that I am very well pleased with the experimenting of the five-acre plot. I see that it would readily pay to farm in that way, as I can see the difference between the other wheat and that of the plot, and I wish that all my wheat had been as good as that.
>
> L. H. Lykken
>
> Grafton, N. D., Aug. 22, 1912.

> I can tell you that I have learned a whole lot more about farming this summer, and I expect to do more and better work on my farm after this. I think for my part that the farmers around here could almost double their yields if they would double the work on their fields in the spring; and also the very best seed ought to be used. Would not have missed it for one hundred dollars.
>
> L. A. Boe
>
> Dalton, Minn., Aug. 31, 1912.

Out of years of study and experiment a definite thought and plan of action have matured. These are the logical steps: We do not know the ultimate possibilities of soil production; but the experience of Great Britain, Belgium, Germany, Denmark, and other countries proves that we might double the yield of our principal

crops. All authorities are now convinced of this. The value of farm products in the United States in 1912 being more than $9,500,000,000, the prize is worth trying for. It calls for the adoption of modern methods; proper fertilization, crop rotation, seed selection, germination tests, deep plowing, and thorough and repeated cultivation. The raising of live stock must be held as important as the growing of grain. Get all the farmers of the country to agree to this programme to-morrow and to follow it, and the trick is turned. How can this be brought about?

How can the actual farmer of to-day, middle-aged or elderly, narrow-minded, conservative, skeptical, unbelievably custom-bound, with neither the opportunity nor the qualities necessary to textbook or classroom education, be reached?

To-day the demonstration farms, aided and directed by the crucible, the retort, and the culture pot, are answering this all-important question. This is what they say: The way to educate men on the farm is to take instruction to them, since they either cannot or will not go to it. The way to interest them in it is to make it profitable to them from the beginning, with proof that the further they follow it the greater their gains will be. The way to make them understand the better methods is to see that they carry them out on their own ground with their own hands. The time to do this is now. Man may go "back to the farm" fearlessly when Science has preceded him thither and stands with outstretched hand to welcome and confer upon him her unfailing assurance of a blessing in basket and in store.

WHAT I AM TRYING TO DO

TO KEEP MINNESOTA FARMERS ON THEIR FARMS, BY MAKING THE COUNTRY SCHOOL-HOUSES CENTRES FOR SOCIAL RECREATION, FOR AMUSEMENT, AND FOR PRACTICAL INSTRUCTION IN AGRICULTURE AND HOUSEHOLD ECONOMICS

BY
ADOLPH O. EBERHART
GOVERNOR OF MINNESOTA

SEVERAL years before my election as governor of Minnesota I was appointed by the commercial club of one of the southern cities of the state to go to Minneapolis to secure farm laborers. The farmers were suffering from an excess of crops and a lack of men to harvest them. Having heard that the cities contained large numbers of unemployed men who claimed to be looking for work, they thought it best to send someone to Minneapolis to round up a number of these and bring them out into the country where they were needed.

Upon arriving at Minneapolis I had no difficulty in discovering the workless ones. They were seated on the park benches in all sections of the city and overflowing on to the curb stones. Work, it seemed, could not be found. Some of the men were on the verge of starvation and the charitable organizations of the city were taxed to their utmost capacity to provide for them.

"Well," I thought, "my task will be an easy one. All I have to do is to tell these men that work awaits them in the wheat fields of the state and I can carry back as many as we can use."

I approached a likely looking group and told them I could give them work if they really wanted it.

"Lead us to it!" cried one. "We'll do pretty nearly anything to get money."

Then I told them of my proposition. The moment I mentioned the word "country" or "farm" I saw a change come over their faces. When I finished painting my word-picture of the benefits to be

received by accompanying me back home, there wasn't a smiling face in the crowd. They were as glum and dissatisfied as they had been before.

When I asked for a reason for their lack of enthusiasm concerning the scheme one of them said:

"We don't want to go to the country, boss. We don't want to live on a farm. There's nothin' for us there — no life, no entertainment, no lights — nothin' but monotony and work. We'd rather stay in the city and starve than go to the country an' have nothin' to do but work. No, sir, we stay right here!"

And stay they did. I couldn't get one of them to come with me, and the farmers had to harvest their wheat as best they could while the city held in its grasp, unemployed, enough men to garner all the crops of the state.

I saw then that if the farms of Minnesota were properly to be taken care of, if her vast grain fields were to be rightly stripped of their golden harvest, if the problem of the care of the city's unemployed was to be solved — the farm must be made a more comfortable, inviting place where men and women would not hunger for the lights and excitement of the city but would be content to remain.

This was the question to which I then resolved to devote the next few years of my life — how to stop the drift of population from the farms to the city and to turn back at least that portion of the already-drifted necessary properly to attend to the state's crops.

Partly through my own efforts, but mainly by the work of her own hard-working citizens, Minnesota has already partially solved that problem and, I think, will entirely answer it within the next decade.

Their method of operation may be summed up in a few words — much larger returns from the soil and the increase of social advantages in the country through the enlargement of the various functions of the schoolhouses.

Shortly after my election I noticed that, although the population of the state had increased tremendously in the last ten years, the number of children in the country school had decreased in an even greater inverse ratio. The reason for this appeared, upon examination, to be the same that caused the lack of men in the country. The children were drifting to the cities and studying business courses in preference to farming — not because they could make more money but because they were beckoned inexorably on by the lights of the metropolis and by the pleasures that are to be found there.

Again I saw that this condition could be successfully combated only by making the social life of the rural communities more enjoyable— but, the cause discovered, the efficient remedy had to be found.

A study of foreign conditions gave me but little aid. In Europe the communities are far more congested than in our western states. There the little towns are so thickly dotted all over the country that you hardly get out of one before you are in another. In my country it is different. You can travel far, miles at a time, finding few dwellings and perhaps not a single town.

I soon came to the conclusion that the only solution of the problem was to form a social centre where the rural inhabitants could gather and discuss the events of the day, hold experience meetings, have entertainments, and broaden their minds as only those people can who come into contact with one another.

Two institutions presented themselves — the churches and the schools. The former, however, were not available because of the scarcity of preachers and the lack of educational facilities connected with them. Therefore I turned to the schools and found there the true answer to the problem.

Minnesota, luckily, has a large school fund of about $30,000,000. With all our schools and agricultural institutions, we barely use up the interest, and the principal is steadily increasing and in about fifty years should amount to more than $150,000,000, to be invested for all time as a guarantee of liberal education for every Minnesota boy and girl. We were, therefore, not stinted for money — provided we could gain the permission of the people to use it as we believed best.

Our plan at first was rather nebulous, but I was certain of one thing — there were too many scattered schools in the state which, could they be combined or consolidated, would furnish the nucleus for a social centre around which we could build up that "life" which the farmers craved and at the same time enable us the better to teach the children the dignity of farming and its munificent returns.

I soon discovered that I had to combat a rock-ribbed and deep-seated sentiment surrounding the "old red schoolhouse." During my first year as governor I visited thirty county fairs and spoke on the subject of improving the school system of Minnesota for the benefit of the farmers, and I have utilized the opportunities of the well-attended county fair for that purpose ever since.

I found that I had to use two sets of arguments — one for the farmers and one for their children. The former had to be appealed to through their pockets, the latter through their imagination. "What was good enough for me," I was told on hundreds of occasions by grizzled old farmers who had spent their lives on the soil, "is good enough for my children. I went to the little red schoolhouse, I learned all I know there. What's the matter with sending my children to the same place?"

Patiently and with much reiteration I had to show them that, since their school days, the world has advanced a great deal. That agriculture, from being a trade, has taken its place among the sciences of the world. That farmers elsewhere have perfected methods of intensive agriculture which make the raising of crops far easier and the results far larger, and that it is impossible to teach these methods to their children under the old system of small, isolated schools containing, at the outside, not more than a score of pupils.

Again, I pointed out to the farmers how their children, uncontented with the monotony of country life, were clamoring to be allowed to go to the city where they would, in all probability, lead a less comfortable, less healthful life and gain for it less remuneration; how the establishment of the "new" schools would create a nucleus of entertainment which would keep the children at home and, in addition, instruct them in the better methods of forcing the Minnesota earth to give up the vast treasures contained within it. I promised the children social opportunities, entertainments, and moving picture shows in the improved schools.

Finally, two years ago, the legislature appropriated special aid for the construction and maintenance of these schools.

To-day, less than three years after the beginning of the movement, Minnesota has 61 of these consolidated rural schools, besides 30 agricultural high schools, and about 150 applications for institutions of this kind are pending! The idea has spread so rapidly and has met with such immediate approbation that it is difficult for us to obtain teachers, and we have sent applications to many other states for men and women to come and teach in the finest system of agricultural and rural schools in the country.

We soon found that the best way to obtain the consent of the communities to the establishment of new schools was to offer to help the residents to build and maintain them. We could not force the citizens to build new schools, but we could and did offer them state aid if they would consent to the erection of the institutions.

For this purpose the Minnesota legislature laid down a scale whereby each community was allowed $1,500 to help build a school and $2,100 a year ($2,500 for an agricultural high school) to aid in maintaining it. The $1,500, of course, did not come anywhere near covering the initial cost of the building, but it was a help and the additional appropriation for its maintenance proved an inducement.

The attendance of the Minnesota schools at present ranges from 75 to 150 each. The former attendance at the small schools was from 5 to 25. The children are conveyed to and from the schools in covered wagons containing foot-warmers so that the young folks won't get frostbitten by the severe Minnesota winter, and there has sprung up a regular business of transporting school children from their homes to the consolidated schools and back again. This system of transporta-

tion has incidentally brought about the rapid and permanent improvement of the public highways.

From three to five teachers are connected with each of the ordinary institutions and larger numbers teach in the agricultural high schools. In addition we have a system of "traveling instructors," connected with the Extension Work of the University, who regularly visit the schools and talk to the pupils and parents concerning all subjects of interest to a farming community.

Minnesota has found that this system is vastly more economical than the old. In the new schools every teacher has a graded class, possible only in an institution whose pupils number more than fifty. Thus every instructor is enabled to give to every class periods of recitation of half an hour or more, whereas if the total number of scholars were less and the teachers correspondingly fewer, the classes would either not be graded or the periods of instruction would be very much shorter.

Again, the graded schools provide the element of competition among the classes. We find also that it is a great deal easier to obtain teachers for our schools under the new system than under the old because the school now forms the nucleus for a teaching community of from three to a dozen instructors who, mingling together, do not become a prey to the lonesomeness which must necessarily depress a single teacher — particularly if he or she be a stranger to the community.

Many physical benefits accrue to the pupils under the new order. I found, on visiting the various small schoolhouses throughout the state, that very often the light and ventilation were far from good. Pupils were often forced to sit facing the light, thus doing irreparable damage to their eyes, and the sanitary conditions were bad. These evils are entirely rectified in the newly built and scientifically constructed schoolhouses. In addition, the pupils are given health instruction — something which they rarely received under the old order of things.

The new system has done and is doing much for the grown people, also, in keeping them on the farms by lessening the lure of the city. Among the first things which the State Department of Education provided for in establishing the "consolidated schools" were classes for the farmers themselves at which they could have the benefit of the latest discoveries of science in relation to tilling the soil and could thus be enabled to increase their output and thereby add materially to their own profit and to the betterment of the country in general.

At the farmers' classes, most of which meet in the evening after the day's work is done, the pupils — some of them gray-bearded old men with grandchildren who attend the regular courses — are instructed in the best methods of farming. Experts from the University of Minnesota and from the State Agricultural College tell them what crops are best adapted to the soil in their community and instruct them in the latest methods of "intensive" farming and deep plowing. As a result, the crops of Minnesota have already begun to increase at a rate beyond the average.

Instruction is given also in the testing of milk, butter, corn, and grain; the increase of the percentage of butter-fat in milk; the increase in the size of the grains of corn or wheat in relation to the enlargement of the entire crops; and greater soil fertility.

All these things are told to the farmers in plain, simple language by experts from all sections of the country who are sent to Minnesota either through the courtesy of the Department of Education of the state or through the efforts of the local school officers. All instruction is, of course, free and the expenses of maintenance are paid by the state appropriations and by the school tax of each community.

The education of the farmers' children is substantially the same as that of the children of the city in addition to being more practical. Instruction is given in agriculture, manual training, sewing, and cooking. Teachers in all these branches are provided by the state, and I have found that the children are thus gaining a far higher idea of the dignity of labor and are losing much of their former desire to go to the city and be "ladies" and "gentlemen" rather than be farmers or farmers' wives.

For the combined benefit of the farmers and the children of their families Minnesota has injected a large dose of the social element into her new school system, and it is the adoption of this novel idea, more than anything else, that will keep her farmers at home and prevent her young folks from drifting cityward. The schoolhouses that used to be dark and untenanted at night are now ablaze with light and gay with the sound of music and song. There are frequent entertainments at the schools — illustrated lectures, moving pictures, concerts, athletic entertainments, and the like — and each community is thus enabled to provide its own amusement at a comparatively negligible cost, something which was impossible when there was no common meeting place for the residents of the surrounding country and no experienced teachers and leaders to organize the social movement. Every school house now has its own library of current and classic fiction, in addition to the usual reference books for the use of the scholars during school hours. Pianos have been installed in most of the schools, and musical entertainments have been taken up by practically all the young folks as one of the most satisfactory methods of passing the long winter evenings.

Our present plan is to have the school boards of every community own a number of educational moving picture films which may be rented to other schools for a nominal fee just sufficient to pay the cost of their transportation and upkeep; and I hope that, through the medium of the "movies," the outlying districts of my state will be educated in scenes which they would otherwise never see. While these films will at first be largely of an instructive character only, I also hope to have it so arranged that every schoolhouse will operate its own moving picture machine and thus be enabled to portray pictures of an entertaining type which it could rent for comparatively small sums — if necessary, charging a small admission for the privilege of seeing these presented. I sincerely believe in the educational and entertaining value of moving pictures, when properly supervised, and I think that their introduction into Minnesota's schools will be a great aid toward keeping her young people at home — for entertainment is what they crave, and the combination of social opportunities, concerts, and moving pictures will give them all the healthful entertainment which they would find in the cities.

In the warmer months of the year the boys and young men of the communities will be trained in athletic sports and competition between neighboring towns or schools fostered to the utmost degree. At the same time the feminine portion of the school will be given lessons in the proper care of the home, interior decoration, and the like; and classes in geology, botany, and other "out-door studies" will be organized if enough interest is evinced in these subjects.

Thus Minnesota is taking care of her next generation of farmers — and taking care that they are brought up to be farmers. The drift of population from the farms to the cities must be checked. Already is there a great scarcity of workers in the fields, and, with the crops every year increasing by millions of bushels, the need for men capable of harvesting them is ever greater and when the soil is made to return its best possible yield the problem will be even more difficult.

I can see no solution for the question but to make country life more attractive and, to my mind, the Minnesota method is the only one. It is practicable and comparatively easy of accomplishment. Although we have been using it but three years, the farmers throughout the state are intensely gratified at its results and are clamoring for more schools of the same kind. They realize that the new system keeps their children at home, that it offsets the hunger for city life which is at the bottom of the lack of men in the rural section, and it assures a large, well educated country population for the future. And the cost is negligible. It might cost more in a state not fortunate enough to possess a school fund of the magnitude of that which Minnesota has — but what if it does cost more? It is worth it many times over.

THE POWER OF THE RAILROAD BROTHERHOODS

THE BROTHERHOODS OF ENGINEERS, FIREMEN, CONDUCTORS, AND TRAINMEN COLOSSAL INSURANCE ORGANIZATIONS WHOSE PROFITS FROM POLICIES THAT TOTAL NEARLY HALF A BILLION DOLLARS ARE THE "WAR CHEST" OF THE UNIONS AND THE FINANCIAL BOND THAT HOLDS THE MEN TOGETHER

BY
GILSON WILLETTS

THE four principal railroad brotherhoods are made up of the engineers, the firemen, the conductors, and the trainmen, with a total membership of 300,000, or 95 per cent. of the crews of the Nation's 60,000 locomotives and 2,000,000 cars. The greatest, richest, most powerful, and most respected of these four big brothers is the Brotherhood of Locomotive Engineers — the model for all brotherhoods. The Brotherhood of Railway Firemen, which has lately been most largely in the public eye because of its demands for a wage increase on all the North Atlantic roads, learned much of its methods from the engineers' order.

All four big brothers are the teachers of all the little brothers, including telegraphers, clerks, carmen, trackmen, switchmen, and the organized shop craftsmen. The big and little brothers together comprise the great majority of the country's 1,700,000 railroad employees. All are affiliated with the American Federation of Labor, except the four big brothers.

What is it that holds these men together and gives them such great power as organizations? It is chiefly money. It is the millions of dollars paid in for dues and insurance and the resulting surplus funds. The handling of these vast sums gives these unions the complexion of great business enterprises, and the funds are administered in a way that has elicited the admiration of financiers.

The millions paid into the brotherhood treasuries are used to maintain the greatest system of benevolence known to the labor world. The engineers, who organized fifty years ago, have insurance policies in force amounting to $130,000,000; they have paid out $24,000,000 to injured members and heirs. The firemen disburse $1,000,000 a year in injury benefits and have $87,000,000 in beneficiary certificates in force. The conductors' union has underwritten $100,000,000 of insurance and has disbursed $14,000,000 in benefits; it has paid $1,500,000 in monthly payments to aged and disabled members and has a reserve relief fund of nearly $2,000,000. The trainmen pay an average insurance of $2,350,000 a year and have disbursed $23,000,000 in benefits.

These organizations as a whole have underwritten half a billion dollars of insurance. They have paid out altogether $100,000,000 in benefits, at an administrative cost of from 1¼ to 1½ per cent. And in addition to reserve funds each brotherhood has a separate strike fund always at the command of the chief. The engineers and conductors each have a strike fund of $100,000; and each has further immediately available resources of a million dollars for strike expenses.

Insurance, then, is the strongest pillar of the railroad labor organizations. Plenty of money in the treasury is the first essential of success in retaining members in oneness of aim. When a member once begins paying his assessments, his interest is so bound up in the success of the union that he must remain loyal or suffer pecuniary loss. The chiefs are thus able to exercise control over the members; and such control increases in direct proportion to the increase of the reserve fund and of insurance in force.

The possession of surplus millions gives the brotherhoods an investing power. In what is the money invested? The Erie's vice-president, Mr. J. C. Stuart, said to a brotherhood leader: "You are the trustee of a fund of your union. You have three millions in your treasury. Is any of that money invested in railroad securities?" The answer was: "Not a dollar."

"And that," said Mr. Stuart, afterward, to Mr. Warren Stone, chief of the Brotherhood of Locomotive Engineers, "was a pertinent exhibition of the confidence that railroad men have in railroad securities."

"No brotherhood could afford to invest its money in the holdings of railroads," Mr. Stone replied. "If I had ten millions to invest to-day for my brotherhood, I would not put a dollar of it in a railroad. I would not dare." It should be added that Mr. Stone, as the leader of the greatest of the brotherhoods, is the leader of railroad labor leaders. As he goes, so go all the big and little brothers.

Brotherhood leaders deny that the reason they "dare" not invest in railroad holdings is the fear of strikes. They say the reason is that they find other securities "safer." But railroad officials assert that the brotherhoods "dare" not risk their money in railroad securities because their value may depreciate through losses to the railroad due directly to strikes. One illustration of this point will suffice. There was recently a strike of 10,000 railroad clerks on the Illinois Central, in regard to which the editor of the official magazine of the clerks' brotherhood wrote:

> The Illinois Central has lost six millions in earnings in the nine months since the strike was ordered. The greater part of the loss has been due directly to the strike. Illinois Central stock continues to tumble beautifully. We may see it offered as premiums with tobacco if the strike is not soon settled.

In what, then, are the surplus millions invested? The brotherhood leader of whom I asked this question replied: "Municipal bonds."

Another safe investment, from the brotherhood viewpoint, is real estate. In Ohio, a railroad federation is investing in farms. "I believe in this farm proposition as a source of revenue for the clerks' brotherhood," said a member of that order. "I am in favor of buying and maintaining farms, the proceeds to be used for strike expenses."

The engineers entered into landlordism by putting up one of the finest office buildings in Cleveland. It is a twelve-story structure containing, incidentally, the executive offices of the order and an auditorium seating 1,500. It cost $1,250,000, and it yields an annual rental return of $100,000, all which is devoted to helping needy engineers.

Some of the brothers actively urge that the unions exercise the power of their purchasing strength which is represented by the more than a billion dollars a year earned by the members of the orders. "The purchasing power of the union dollar rightly applied," says the journal of the carmen's brotherhood, "would ameliorate many unjust conditions. Let's put the union label where Big Business will take notice — right on our dollar bills."

Such is the size of the dollar mark that is the backbone of every railroad strike movement. But where does a strike movement originate? Who starts it? The initial step is taken in the executive offices, where the chief measures his own dollar mark and notes the dimensions of the dollar mark of the various roads. It is he who knows best when and where to make a "touch." He is always the "moving spirit." Mr. E. D. Robin, counsel for the New Haven Railroad, once said of Chief Stone: "He is a feudal baron whose men follow him blindly." Mr. Stone replied: "The door of every operating official is open to me. That is because there are seventy-two thousand men behind me who *do* follow me blindly."

How do the "moving spirits" apply their power in the "big business" of railroad labor? Principally in securing satisfactory contracts with railroads. Here again power depends upon insurance money. The brotherhoods acknowledge that their ability to secure good contracts with their employers is in direct proportion to their financial strength. Insurance, then, is the first essential of brotherhood success in dealing with employers — and the Little Brothers now have contracts

with 90 per cent. of the roads while the four Big Brothers have contracts with every important road, 240 in all.

The brotherhoods used their strength to secure the seniority clause in contracts, whereby the oldest man in the service of a road has preference in promotion. Chief Stone said: "Before the engineers were thoroughly organized, I knew men who had fine runs because they gave a rake-off to some official. One man had the finest limited run in the West because he kept the superintendent supplied with chickens. That's why we fought for seniority."

But sometimes satisfactory contracts cannot be readily secured, as the brothers say, "with the hat off." It is then that the leader exercises his control over his men by securing from them a strike vote. And, in a statement given to me on this subject, the chairman of the board of one of the greatest of the western roads said: "I do not recall a single instance in which a vote was taken by a brotherhood on the question of strike where the vote was *against* the strike."

With the strike vote in his pocket, the leader now returns to the railroad managers — and in nine cases in ten gets the desired contract. The threat of strike has accomplished far more for the brotherhoods than actual strike.

Several months ago, when the roads out of New York refused to grant a wage increase to the engineers, Mr. Stone said to the railroad managers: "I believe you are making a fatal mistake. If my men vote to strike and I order them out, not a wheel will turn and New York will not have a pound of food at the end of a week. Freight cannot be transported and all industries will come to a standstill. I suggest that you reconsider your decision."

A managers' committee representing fifty-two roads "reconsidered" and again refused. Forthwith Chief Stone secured a strike vote from his men and then told the committee that unless they raised the engineers' pay, he would order out 30,000 throttlemen and not a wheel would turn east of Chicago. He declared that the strike would put all eastern cities on a starvation basis, that countless breadwinners would be thrown out of work, and that the business world would lose millions. The matter was finally compromised through arbitration. "But the whole business was *forced*," said one railroad manager. "It was forced by the strike vote, the Big Stick of brotherhoodism." And as a still more convincing proof of the potency of the Big Stick, President Worthington, of the Chicago and Alton, said that, in 1911, he granted higher wages to men on his road, when the road could not afford it and hence against his better judgment, "because I was forced to, being confronted by the threat of a strike."

Again, Chief Stone one day asked Vice-president Stuart, of the Erie, why certain roads gave the men an increase of pay, in 1910, amounting to millions of dollars annually, though asserting that they could not afford it. "We had to," Mr. Stuart answered. "The men threatened to strike. We were facing a crisis."

"Then the way for me to get a raise now," Mr. Stone retorted, "is to create another crisis."

And when I asked the president of a great western road why the western lines had granted certain demands of the men for advanced pay, he replied: "Employees on certain lines demanded increases and it seemed wise to those properties to grant such advances rather than imperil the value of their securities. The demand to 'pay or we strike' came at a time when business was at its maximum and when the question had to be decided by the railroad companies whether they would stand a 100 per cent. ruin or a 50 per cent. So we granted the increase. These increases have invariably been the result of crisis, compromise, or arbitration, but always they have been forced by the leaders."

Brotherhood power, however, is not exercised solely through the leaders. Legislative boards are provided for in the constitutions of the orders and the members of these well organized boards look after the men's interests in respect to legislation in Washington and in the various state capitals. They interview candidates and office holders, whose views on labor are then imparted to the brothers with a warning as to which politicians are "foes of labor."

The railway bill of 1910, as originally

introduced in Congress, contained a clause fixing certain responsibility on organized railroad labor. The brothers did not like that clause. It was eliminated. And Senator Root, who had supported the clause, was called a "foe of labor." The official magazine of the clerks' brotherhood urged, "At the next election, if any candidates are stockholders in railroads or are foes of labor, don't vote for them." And the carmen's brotherhood magazine said: "When candidates are up for election, make them declare themselves on labor. If they are foes, go on strike on election day."

The brothers have thrown their hats into the political ring, too, to secure higher rates for the railroads.

Every railroad official with whom I talked declared that these brotherhoods should be subject to Government regulation, as the railroads are. They argued that when labor breaks its contracts with employers and threatens the country with starvation, regardless of the public's rights, labor should be restrained by the intervention of Federal authority.

The brothers argued, on their side, that they did not need laws to make them keep their contracts or respect the public's rights. One leader said to me: "The infrequency of railroad strikes shows that we keep our contracts voluntarily and do not attempt to deprive the people of the necessities of life through stopping the wheels." This leader pointed out also that the brotherhoods have set an example for the whole labor world to follow in observing the sacredness of contract.

In the summing up, the fact remains that, however arbitrarily the power of the brotherhoods is exercised, there is less opposition to unionism on railroads, less actual warfare, than is found in any other great industry.

GERMANY AND ENGLAND'S ATTITUDE TOWARD TRUSTS

BY

SAMUEL P. ORTH

OUR aphoristic Speaker Reed first called us "A Billion Dollar Country." But the Industrial Revolution was no respecter of nationalities; and not only America, but every industrial land, is face to face with billion dollar business. And every country is meeting it in characteristic manner, determined by legal and governmental habit, and by ethnic temperament.

As America is the home of the trust, so Germany is the home of the cartell. Of these combinations there are three types. First, is the "Selling Agreement," in which a minimum price is fixed, allowing, therefore, some elasticity in price movements and not affecting the output, the distribution of business, nor the quality of the article. The industries that make finished products, like furniture or lace, usually use this form of combination. The second and more complete type of merger is the "Sales Syndicate." Here the members pool their products and turn them over to a committee appointed by the members of the cartell. This central board or committee fixes the selling price, distributes the business, sells the product and apportions the profits. Every constituent company thus surrenders its market, but it retains its corporate individuality. This is the most popular form of the cartell, and is peculiarly adapted to the manufacture of half-finished products, like building material, pig iron, and steel ingots. The great coal syndicate and steel syndicate belong to this form.

The third type is inflexible. It embraces the "organized cartells." This is an actual consolidation of numerous companies. The German corporation law

permits many forms of organization, such as civil partnerships, commercial partnerships, etc., whose distinctions are highly technical. But, whatever the outward legal form, the "organized cartell," is the severest type of merger known to German law.

And it stops just short of being a trust in our sense of the word. There is no actual merging of ownership. The Germans make a good deal of this difference, and boast that they have no "vicious American trusts." The head of one of the greatest cartells assured the public, at the time his combine was organized, "We do not wish to emulate the American trust, which destroys not only self-dependence, but all technical progress."

This is merely a distinction without a difference. For the truth is, these German cartells are just as effective in Germany, under German conditions as the American trusts under American conditions. In business the market and the price are the elements that rule; and when you have surrendered control of your limited market, and given up the right to fix your own price, there is little in the plea of technical ownership. Nor are the cartells' methods any milder than our trusts' methods. Take, for instance, one of the greatest of these cartells, the "Steel Syndicate," organized out of a pooling of steel interests about ten years ago. It gradually drew into its circle all the great steel manufacturers excepting Krupp and the Phoenix Works. When Krupp got a guarantee of the share of the business he demanded, he entered the combine, and "Phoenix" remained the colossal "scab" of the German steel industry. Then the syndicate got busy. Pressure was brought to bear on the banks, which are very powerful in Germany, and the banks put the weights on the stockholders, and the stockholders put the thumb-screws on the directors of "Phoenix", and in the financial torture the steel giant writhed into the Combine.

What is the attitude of the Government toward these all-embracing cartells? Here we must inquire into the imperial policy as to railway rates and the tariff, as well as into the laws and their adjudication by the courts.

But first of all, let me assure the reader that the word "monopoly" has no terrors for the German. The policy of the German Government is to stimulate industry, not to regulate it. The key to the German trust situation is the ambition of the Emperor to fix his "place in the sun."

With this in mind, let us begin with the protective tariff. The German tariff policy puts a duty on food stuffs and manufactured goods, and leaves raw material on the free list. The duties are not so high as those of the American tariff but they are high enough to protect! The tariff law is the resultant of two opposing forces: the landowner, especially the feudal landlord, on one side and the manufacturer, especially the great manufacturer, on the other. The landed proprietor wants a duty on foods and grains to raise the price of his products, the manufacturer wants a duty on manufactured products to raise the price of his output. But the manufacturer prefers cheap food, for it lessens wages, and the farmer prefers cheap clothing and machinery, for it lessens cost of production. The tariff act fairly satisfies both. It establishes a minimum grain duty, and authorizes commercial treaties on a preferential basis. So there is a political union of the big farmer and the big manufacturer for mutual profit.

In 1903, the Department of the Interior began an investigation of the cartells with the clearly avowed purpose, not of eliminating them, but to discover if further laws were desirable for their regulation. This inquiry, which lasted three years, and was conducted in the painstaking German manner, reached the general conclusion that no new legislation was desirable, and that, while great industrial combinations have some disadvantages, they are more than offset by their advantages, and that neither the interests of private individuals nor of the country are jeopardized by cartells. This remains the official attitude.

The Government has an opportunity to carry out practically its policy in the running of the railways. In Germany all the railways, as well as telegraph and telephone lines, are owned and operated

by the Government. And in the management of its lines, the Government does not hesitate to favor particular industries or particular districts. Not to the detriment, however, of other *German* shippers, but to handicap foreign competition. There are fixed freight-schedules, yet nearly 63 per cent. of the rates are "special" or "exceptional," i.e. made for the particular occasion. And this flexibility is used wholly in favor of the German shipper. In other words, Germany uses her railways to promote German industry, trusts or no trusts. And in 1905 the net profit on the Prussian lines was $120,000,000 in the face of this policy.

It is natural that in a country where imperial ambition throbs so powerfully that the laws and the courts should be in complete harmony with the Government. There is, of course, no common law against monopoly or restraint of trade. There is a general corporation law, and it is, like most German laws, a model of comprehensive, scientific law-making. Under its provisions, scrupulously enforced, many of the glaring evils of the American corporation have been avoided. Stock-watering, fraudulent promoting, and secret manipulation are quite impossible under this law. But it does not in any way regulate the size of the corporation or business or the number of concerns that can be drawn together into one syndicate. I should add, however, that the German courts have declared that the cartells and syndicates must be held to a high standard of business morals, and their officers to a high degree of responsibility.

Cartells, then, are an integral part of modern German economic nationalism, not discouraged by law, favored by the Government, and nurtured by the Kaiser. With what result? A gleaming prosperity, a wondrous statistical prosperity: a prosperity superimposed upon this nation of efficiency worshippers, from the top downward.

It does not impress you as a permeating prosperity. It is not a prosperity that comes from the people, but from the favored industrial leaders. It's a mahogany prosperity, and in a nation docile to discipline this is possible. But even here the people are beginning to protest. They have learned that Belgians are buying Westphalian coal cheaper than the German consumer; that the wire trust is selling abroad, for 115 marks, what it prices at home at 185 marks; that the nail syndicate charges the German fifty per cent. more than the foreigner; in short, that the German cartell is as expert in scientific dumping as in "scientific price-making."

The small dealer and small manufacturer have organized the *Hansa Bund*, as a protest against Big Business. Recently the women organized a revolt against the high price of meat, due to the tariff. And the workman has organized his Social-Democratic party whose 4,250,000 voters may, at no distant day, prompt the Government to heed *the consumers'* point of view.

II

Turning now to England, the home of the industrial revolution and the land of free trade, we find combinations as flourishing, though of a slightly different structure, as in the hide-bound and super-disciplined land of the German.

The development of the thread industry into a great trust is so typical of the English method that I will briefly describe it. In a very modest mill in Paisley, James Coats started to manufacture sewing thread in 1826. Sons and grandsons inherited the business, together with James's genius for management, and the business grew into great magnitude. In 1890 a limited liability company (the favorite form of British corporation) was organized to take over the mills of J. & P. Coats, paying about $29,000,000 for the property, which included a mill in Pawtucket, R. I.

Meantime the chief rivals of the new combine had formed the Central Thread Agency, which took over the products of four great mills: Jonas Brook & Co., of Meltham, founded in 1810; James Chadwick and Co., of Boulton, founded 1820; Clarke & Co., of Paisley; and Kerr and Co., of Paisley. In 1895 and 1896 J. & P. Coats purchased all these concerns, and thereby became owners of mills in Canada, Russia, France, England, and Scotland. They had

sixty branch establishments, one hundred and fifty warehouses, and employed five thousand people.

Soon after this the Coats concern acquired an interest in the Fine Cotton Spinners and Doublers Association, composed of fifty or more firms spinning Sea Island cotton, with a capital of more than $37,000,000. It virtually controls the fine cotton supply. At this time J. & P. Coats raised their capital to $60,000,000 and on this amount they have faithfully paid dividends ranging from 20 per cent. to 30 per cent.

This was the prosperous condition of the Coats syndicate when the concerns that had been left out were prompted to form a combination of their own. In 1897, fourteen of these organized the English Sewing Cotton Company with $11,000,000 capital, and mills in Canada, France, and Great Britain.

In 1898, the American Thread Co. was organized with about $18,000,000 capital, absorbing thirteen concerns.

Here then are three combines of manufacturers, nearly all English, controlling the thread business of the world. Their inter-relation is made plain when it is known that J. & P. Coats took $1,000,000 of stock in the English Sewing Cotton Co., that the English Sewing Cotton Co. took the majority stock in the American Thread Co., that J. & P. Coats took $500,000 worth of preferred shares in the American Co., and that the American Co. took 125,000 shares of the English Sewing Cotton Co's. re-issue of 1899.

There is another kind of combination popular in England which is not permitted in America. This is the pool, or loosely organized alliance, a working agreement between natural competitors for the same market to stop fighting and to unite upon a common price and on the amount of output.

For instance, in the Scotch malleable iron trade, favorably known the world over, there has been such an agreement for more than twenty-five years. As early as 1886 The *Iron and Coal Trade Review*, commenting upon a general rise in prices, said: "There is no combination of a hard and fast character amongst the makers, but almost, as if by common consent, they have fallen in with the suggestion of those of their number who took the initiative in the matter. Even the largest concerns have identified themselves with this upward movement." This naïve description of one of the earliest price agreements might be completed by adding that in 1902 forty malleable iron makers of the two competing districts, Scotland and Northeastern England, entered into an agreement not to invade each other's markets.

Now this is a form of combination that is peculiarly distasteful to American law. The Sherman Law has made it an outlaw; and President Taft, as presiding judge in the Addyston Pipe case in 1898, opened the inquisition which his Administration so zealously pursued.

So in England not only the likeness of the American trust but the type of the German cartell flourishes, but it is not protected by tariffs and is therefore threatened constantly by foreign competition. Indeed, it is this constant fear of the foreigner's goods which has influenced the courts in sanctioning these combines, and has made even the Englishman, the most stubborn of individualists, resign his scruples for independence and enter into protective association with his English competitors.

As in Germany, this concentration is found in every line of industry.

And what is the policy of the courts and the Government toward this newer phase of industrialism?

The common law prohibits monopolies and combinations in restraint of trade. But the English courts have not interpreted these ancient legal maxims to mean that *all* combinations are *per se* in restraint of trade, or monopolistic. On the contrary, *the policy of the English law is to encourage competition, but it does not prohibit combination.*

The leading and oft-quoted case is that of the Mogul Steamship Co. vs. McGregor, Gow & Co., *et al*, which found its way for final determination into the House of Lords in 1891. The defendants were a "Conference", i.e. a combination, of shipping companies, who, in their endeavor to control the Hankow tea trade, had tried

to exclude the plaintiffs from the trade by offering special rebates to those shippers who patronized the "Conference" lines exclusively. The plaintiffs claimed that the "Conference" was in restraint of trade, and, therefore, unlawful. But the House of Lords were unanimously of the other opinion, and sustained the validity of this rebate-giving shipping ring in a memorable decision which declared that the defendants "have done nothing more against the plaintiffs than pursue to the bitter end a war of competition waged in the interests of their trade," and competition, however violent, is "not contrary to public policy." Lord Justice Frey said, "To draw a line between fair and unfair competition, between what is reasonable and unreasonable, passes the power of the courts." And Lord Justice Bowen found comfort that such combinations, "in a country of free trade," would not become monopolistic, and he thought that it was not "the province of judges to mould and stretch the law of conspiracy in order to keep pace with the calculations of Political Economy. *If peaceable and honest combinations of capital for purposes of trade competition are to be struck at, it must, I think, be by legislation, for I do not see that they are under the ban of the common law.*"

This is a very significant passage. It places the responsibility for drastic anti-trust action on Parliament, not on the courts.

And what has Parliament done?

It has passed a splendid Companies' Act, which enjoins searching publicity on all corporate affairs, prohibits that most vicious of all corporate evils, stock-watering, and prevents fraudulent promoting and other crooked financial dealings which taint the records of so many of our corporations. This act permits of holding companies, and its provisions are often used for the purpose of consolidating many separate concerns into one control. No attempt is made at trust regulation.

Nor has the Government busied itself with all these rings, pools, and trusts. It has never made a general investigation of them. In 1906 a Royal Commission looked into the affairs of shipping rings whose influence on an island empire is naturally very great. The commission, after several years of inquiry, merely suggested the establishment of a method for settling disputes between shippers and steamship lines by arbitration.

In 1908 Sir Gilbert Parker asked the Prime Minister the following carefully worded question:

> I beg to ask the Prime Minister whether he is aware of the existence in Great Britain of trusts, rings, cartells, and other combinations having for their object the monopolization of trades and markets, by regulating the output or by keeping up prices and stifling competition; and seeing that such combinations are in restraint of trade, and are, therefore, inconsistent with the present free trade policy of the country, whether he will take steps to restrain the increasing monopolistic operations of foreign trusts in the United Kingdom; and whether the Government will grant a Royal Commission or a select committee to inquire into the existence of railway conferences, shipping rings, coal rings, industrial combinations of the iron and steel trades, such as the rail-makers, syndicate, and other organizations like the Imperial Tobacco Trust, the Meat Trust, and the German Electrical Manufacturers' Trust.

To this formidable question Mr. Asquith quietly replied:

> I am aware of the existence of trade combinations of the kind referred to, in the United Kingdom, and I agree that in some cases the effects of these may be prejudicial to the public interest. But the operations of such trusts are necessarily more circumscribed and less mischievous here than in other countries in which they are fostered by a general customs tariff and I doubt whether there would at the present time be any advantage in such an inquiry as the honorable member suggests.

So both the Government and the courts have full faith in the efficiency of free trade in curbing the grosser evils of trusts, and in the common law in preventing the subtler evils of unlawful restraint, and in a sensible corporation law in protecting the public against fraud and malicious financial machinations.

England's experience teaches us that in a land of traditional individualists, where the channels of trade have been kept

fairly open, where the ancient customs of the people abhor monopoly and trade restrictions, there is maintained a considerable degree of competition whose wholesome effect is not destroyed by the large business combines. England challenges the competition of the world, and believes that trusts which can thrive under the conditions of this proud challenge are welcome to their prosperity.

Neither Germany nor England tries to regulate the trusts as we do; neither tries to uproot them. The one cherishes them, the other tolerates them. Both recognize that Big Business has come to stay.

Germany's experience shows plainly that an alliance between the Government and Big Business can produce an upper crust of prosperity. How long it will last no one can say.

England's experience shows that the old common law is not to be despised as a policeman, especially when artificial barriers to trade are all taken down.

From both countries we can learn to recast our corporation laws to prevent stock-watering and corporate frauds.

MARVELOUS PREVENTIVES OF DISEASE

HOW WE MAY NOW BE MADE INVULNERABLE TO THE ATTACKS OF TYPHOID FEVER, BUBONIC PLAGUE, AND CEREBRO-SPINAL MENINGITIS — HOW MEMPHIS SAVED ITSELF FROM AN EPIDEMIC — THE BENEFICENT WORK OF DRS. A. E. WRIGHT, NOGUCHI, HAFFKINE, AND SOPHIAN, AND OF OTHER PIONEERS OF PREVENTIVE MEDICINE

BY

LEONARD KEENE HIRSHBERG, M. D.

NO STORY that has yet been written ought to send the blood tingling faster through your veins than a spirited narrative of the marvelous conquest of many maladies by the newer immunity methods. Compared with it, the exploits of Cæsar and Charlemagne, Beowulf and King Arthur, are trite and dull. Greater heroes than these by far are Jenner and Koch, Louis Pasteur, Metchnikoff and Von Behring, Kitasato and Sir Almroth E. Wright, Paul Ehrlich and Simon Flexner.

Artificial immunity is concretely explained by cowpox vaccination discovered by Jenner over a century ago. When you are vaccinated, a mild variety of cowpox is given to you. It is really a harmless and "poor relation" of smallpox. Practically the ultra-microscopic microbe of cowpox, or *vaccinia* as it is called, is an attenuated sort of smallpox germ. Once it is scratched, inoculated, or passed into the body, your blood begins to elaborate a principle which attacks and overcomes these faint-hearted smallpox parasites. You are well, but something has been left within you, added to your tissue juices. This is the anti-smallpox chemical which has been enlisted in your bodily army of defense, ready for many years thereafter to overcome the most virulent smallpox germs that may enter your system. The few hours of sore arm and fever that accompany vaccination have made you immune to smallpox.

Now, in this method of immunizing the normal man, calves are used as laboratories for the growth of the attenuated smallpox principle. According to several other methods, a healthful man may be immunized by transporting into his arteries the blood serum of a horse, of a sheep, of a cow, of a hog, or even of a guinea-pig that has been previously immunized. This serum contains the active anti-principle already made for the man into whose veins it goes.

If, as does happen in diphtheria and

lockjaw, the germs themselves are merely disturbing objects that remain in the throat or in a nail wound, and the poisons they make cause the respective diseases, it is the poisons and not the germ which makes the animal produce an anti-poison. Hence lockjaw and diphtheria immunity is brought about by injecting into people the serum taken from the jugular veins of horses that have received steadily increasing doses of germ poisons or toxins. This serum is named commercially anti-toxin. Human beings injected with lockjaw and diphtheria anti-toxins are immune to those ailments.

The staphylococcus is a tiny bacterium not unlike the dot or period that ends this sentence. It is an old offender of microbe misdemeanors, as the common cause of pimples, boils, carbuncles, sores, catarrhs, and other simple festerings. It is found in the air, on the ground, and upon everybody's skin. As ubiquitous as dust, it is lurking about always ready to seize an undue advantage of mankind.

Now we all are in danger of boils, pimples, and skin infections, so it occurred to Sir Almroth E. Wright that prevention of these dangers was worth many pounds of treatment after the trouble started. What could be done about it? He evolved the following discovery, which has proved to be eminently practical and successful.

He planted a colony of staphylococci in sterilized beef tea. After they had grown and multiplied for one day in an incubator, the billions of newly developed cocci were killed by heat and a drop of carbolic acid and measured. This is not a difficult procedure. Fifteen drops of beef tea — diluted accurately — were thus made to equal one hundred million staphylococci. Dr. Wright was then prepared to inject his hundred million dead germs — these are called vaccines — into himself and other volunteers, and then to test his immunity toward staphylococcic maladies. He soon discovered that five hundred million dead cocci given hypodermically and repeated twice ten days later with a thousand million, and another similar interval to be followed with the same dose, produced an immunity to boils and sores that lasted several years.

Vaccination with killed cocci, to prevent these skin infections, is now carried on extensively all over the world. Some surgeons now immunize their patients before operating upon them, while dermatologists are never without a good supply of staphylococci vaccine in their offices.

The venom of various snakes, such as the cobra, rattlesnake, water-moccasin, and certain sea snakes, has been collected and converted, by immunizing horses, into antivenin. It requires repeated inoculations over a period of six months to immunize a horse. Dr. Noguchi of the Rockefeller Institute of Medical Research has produced the most successful anti-rattlesnake venom. It protects completely from the poison.

No disease, however, has been dealt a more dramatic blow by artificial immunity than typhoid fever. This baneful malady, that has raged through the ages in all the countries of the world, has at last succumbed to a preventive vaccine, although once it has developed it is still resistant to every known scheme of treatment.

As far back as 1896, Sir Almroth E. Wright obtained pure family strains of the typhoid bacillus from soldiers ill with "enteric" fever, and planted them in clean, well-boiled bouillon. After these had developed into a typhoid progeny of quadrillions, tiny glass tubes were filled each with five hundred million typhoid germs that had been previously killed. Then the officers of several British regiments stationed in India and South Africa were given one or two hypodermic inoculations of dead typhoid microbes. Although the method was crude the effects that followed were most striking.

Among the troops inoculated only 50 per cent. became infected as compared with those who had received no dead typhoid germs. Moreover, the vaccinated soldiers remained thus protected for three years. The fragmentary and crude procedure thus carried out was, during the next six or eight years, worked out to its present perfection. Sir A. E. Wright first replaced his original single injection with two doses of killed typhoid germs at 14-day intervals. Two years ago, the scheme of immunizing healthy persons to typhoid

fever was so perfected that the Japanese and United States armies and navies issued compulsory orders which require every enlisted man to receive three inoculations of killed typhoid bacilli at 10-day intervals. These stringent orders require that every officer and private shall be thus re-vaccinated every three years. Last year, twenty thousand American recruits were sent to the Mexican border at a critical moment. Every soldier was given a hypodermic needle jab at four o'clock one afternoon. At two successive intervals of ten days each, they again received an injection of one thousand million inert typhoid "bugs," as the soldiers called them. And as a result, on New Year's Day, 1912, President Taft declared that "the absolute prevention of and immunity to typhoid fever in the American troops encamped before Juarez was certainly the most wonderful event of 1911."

The reason for administering the injection at four o'clock in the afternoon is to obviate the ensuing discomforts which usually appear about six hours afterward and which last eight or ten hours. These discomforts are often but not always a sore, swollen arm, a dull headache, and a fever.

Dr. Harry W. Stoner, of the Health Department of Baltimore — which furnishes this typhoid vaccine free of charge to any one — tells of the striking benefits of these inoculated microbes. In one hospital eighty-eight of ninety-one nurses and attendants were injected with the sterilized typhoid germs, nearly two years ago. One of the three non-immunized nurses a few months afterward developed typhoid fever and died. In another institution, a nurse who was on her vacation when the others were given the typhoid-preventive inoculations some time later fell ill with typhoid. At a third institution in which the resident nurses were all vaccinated in 1910, three of eight new nurses, who came in 1911 and who have never received the killed typhoid organism, were stricken. Not one case of typhoid fever has occurred in any institution among those vaccinated.

More than twenty thousand citizens of Memphis are to-day vaccinated — and thus immunized — against typhoid fever. Nearly one hundred thousand enlisted soldiers and sailors of the United States are thus protected, and in Baltimore one thousand doctors and nurses have been inoculated as an example to the citizens.

It is worth while to explain the experiences of Memphis. The Mississippi floods of the early spring invaded the water supply, pouring the sewage of a hundred towns into the mains, and the result was a sudden and alarming outbreak of typhoid. In a short time new cases were being reported at the rate of ten to fifteen a day.

Then the local health department awoke to the full seriousness of the situation. Immediate efforts were made to stop the pollution of the water supply, and a large stock of typhoid vaccine was laid in and all citizens who applied were vaccinated free of charge. The people responded promptly. Within a few weeks 15,000 persons had been vaccinated at public expense and 10,000 at their own expense. In six weeks the epidemic was over.

The preliminary report of the health department shows that the vaccine was very efficient. Notwithstanding that its administration was not begun until thousands of persons had been exposed to the disease, and further that the majority of those who were vaccinated continued to be exposed between the first and final doses, it cut down the case rate and the death rate from the start. Very few of the persons who were vaccinated contracted the disease later on, and in these few cases the violence of the attack was minimized.

Thus the people witnessed an impressive exhibition of the value of preventive measures when unimpeded by politics or quackery. The only persons who refused vaccination were "anti-vaccinationists, Christian Scientists, and Negroes."

What might have happened to Memphis may be the better appreciated when other epidemics are recalled. An epidemic of typhoid struck Maidstone, England, following contamination of the water supply. In thirty days 1,900 cases had developed in a population of 35,000. The same conditions existed there as in Memphis and the symptoms of the numerous stomach complaints were the same.

Plymouth, Pa., with a population of 13,500, following contamination of water,

in forty days developed 1,200 cases. Conditions were the same as in Memphis. The situation in Maidstone and in Plymouth may be regarded as normal when public water becomes polluted. Taking an average from those cities and figuring that 100,000 persons in Memphis were threatened with the bad results of drinking contaminated water, Memphis missed its due number of typhoid cases by nearly 8,000.

In a personal and certainly conservative letter, Dr. M. Goltman, superintendent of the Memphis Health Department, which is under their commission form of government, writes: "We feel positive that this vaccination did a great deal toward keeping down the typhoid fever and the public seems to be equally satisfied that this community has been saved (at a trifling expense, it may be said) from a serious threatened epidemic of typhoid fever.

"We take pleasure in giving you the figures of the expense incurred by this department in controlling the situation — it was less than $10,000."

When Boccaccio's knight sand ladies ran from plague-ridden Florence to a walled city not far distant; when Pepys, with head bowed down, as his diary tells us, stalked the London streets at the time of the Black Death, they would have given their jewels and their money to have received into their healthy bodies a few doses of bubonic plague vaccine, which is ready to-day to stave off the threatening approach of a twentieth century epidemic of that pestilence. Although we know that the fleas that infest rats, squirrels, and various rodents transmit this horrible and deadly East Indian malady, and although the efforts of Surgeon General Rupert Blue are directed toward a Pied Piper method of eliminating rats and the related rodents, it will be upon the newer immunizing methods that our lives will depend if the plague flares up about us. Recourse would at once be taken to Haffkine's plague vaccine or Yersin's serum injections.

The vaccine of Dr. Haffkine is now used extensively in English and Brahman India. The Indian plague commission found that Haffkine's vaccine is almost as successful as Wright's typhoid vaccine. The plague vaccine surpasses the Yersin serum in value, and consists in beef tea colonies of the bubonic plague bacillus six weeks old. These are killed much in the manner of the staphylococci and typhoid germs. Originally only one injection was given, but Dr. Shiga, a Japanese, Dr. Metchnikoff, Dr. Wright, Dr. Lederle, as well as all the immunologists of to-day, adopt the 3-dose 10-day interval method. The immunity that follows lasts even longer than the immunity to typhoid.

Meningitis also is yielding to the preventive power of the vaccination. Epidemic meningitis is an acute, contagious disease that is transmitted principally through the medium of so-called healthy persons called carriers. During an epidemic, many healthy people, especially members of families in which the disease occurs, harbor the germs. The number of healthy carriers is much greater than the number of those ill with the disease. Some authorities estimate that the carriers are ten to twenty times the number of the sick. Only a small percentage of the carriers develop the disease. The danger, however, that anyone who is a carrier may develop the disease is a very serious menace, and causes considerable alarm, especially in an epidemic that embraces all sections of a city, as no one knows whether he or his friends are carriers or not. The occurrence of more than one case of epidemic meningitis in a family is not so rare as is believed by many who are not familiar with the facts; in the recent epidemic there were many instances in which two members developed the disease in one family; and in a smaller number three, four, and five members became infected.

Therefore, when Dr. Abraham Sophian, of the research laboratory of the New York City Health Department and Dr. J. Black, of Dallas, Tex., evolved a meningitis vaccine analagous to the smallpox and typhoid vaccines, they found many people who were willing to be inoculated with it. In fact, Dr. Sophian successfully used the killed meningitis bacteria as a vaccine in the Texas epidemic a few months ago.

The certainty of the efficacy of this vaccine must be determined by experiment by the demonstration of a large immune

body content following the administration of the vaccine, and by the clinical evidence of protection against meningitis, as observed during epidemics, especially among those who have been exposed to the disease.

This work was taken up in the Southwestern Medical College, at the end of the Texas epidemic. For this purpose eleven medical students volunteered to be vaccinated. In preparation of the vaccine, all glassware was cleaned. Microbes, about five generations old, isolated from the cerebro-spinal fluid of one of the patients in Dallas, were used. They were grown on 2 per cent. glucose and, after eighteen hours' growth, were washed off in distilled water, shaken for twenty minutes, then heated for one hour, and tested. They were counted and standardized.

Eleven students were vaccinated. They were inoculated under the skin just below the deltoid muscle; five were injected with 500,000 bacteria as the first dose, and five were injected with 1,000 million. Seven days later, they were vaccinated again, with the same vaccine, in doses of 1,000 million and 2,000 million meningitis germs. A week later they were vaccinated a third time with 2,000 million freshly boiled and killed meningococci, as the bacteria are technically named.

Four days later all ten students could have been exposed to the raging epidemic without succumbing, for a test of the blood of these volunteers showed them to be fully immune to the bacteria. This test is made by growing a strain of these microbes, washing them with distilled water, killing them with heat, filtering them, and sealing them in glass capsules. These digested germs, with blood from a guinea-pig, red corpuscles and serum from two sheep, and a few drops of blood from the vaccinated person, produce a characteristic appearance in mixture which is practically proof positive that the person whose blood is taken is immune.

The reaction following vaccination consists principally of some local inflammation at the site of injection, which appears in about four hours, and usually some trivial general symptoms — redness, swelling, and a soreness, which grows a bit severe during the next few hours. The neighboring glands may become somewhat enlarged and tender. After twenty-four hours, most of the inflammation disappears.

At the next injection, the local reaction may be much more noticeable and extensive, and may be accompanied by a little fever. This reaction is very similar to that occurring in other bacterial vaccinations, as in typhoid vaccinations.

General symptoms may be entirely missing. Frequently, however, there was some headache and slight elevation of temperature lasting for twenty-four hours. At other times there were more severe general symptoms; the patient suffered from violent headache and had some general pain, nausea, and vomiting, with rise of temperature to 102, 103, or 104 degrees. However, these severe symptoms were unusual. Fever blisters occurred, too.

One doctor who studied the effect of the dead germs on the human person injected himself with a much larger dose than is recommended in vaccination. He experienced very severe headache, vomiting, chill, high fever, and general bodily pain for several days, accompanied by prostration.

Observation will have to be made of many who have been vaccinated to determine the efficacy of the measure, especially observations during epidemics and among those who have been intimately exposed to the disease. At present, the data obtained during the last epidemic are sufficient to draw deductions. Dr. Hall, of Kansas City, vaccinated fifty families — about 280 people — in which the disease had occurred, giving every person the full three vaccinations. A number of nurses and physicians also were vaccinated. None of them subsequently developed the disease. In Dallas, Dr. Sophian vaccinated one hundred people. So far as could be learned, very few of them had the full number of prescribed injections. Two nurses, each of whom had only two injections, developed the disease several weeks after the vaccinations; but both recovered. Similarly, typhoid develops occasionally after incomplete vaccinations, and likewise smallpox after smallpox vaccination. It is well known that immunity does not develop equally well in all persons who are vaccinated, and that at times, in a very

small percentage, there may be little response to vaccination. This accounts for most of the very rare failures.

Experience with the prophylactic vaccination against other diseases, such as typhoid, and with the several hundred persons who have been prophylactically vaccinated against the meningococcus, shows no authentic case of either disease following the infection of vaccine, notwithstanding that, in the meningitis experiments, many of the vaccinations were made on positive carriers, to whom the danger would be supposed to be most

GROWING MICROBES BY THE BILLION

SCIENTISTS CULTIVATE MYRIADS OF DISEASE GERMS IN FAVORABLE MEDIUMS (BEEF BROTH, GELATINE, ETC.) TO INOCULATE ANIMALS FOR EXPERIMENTS IN THE PROGRESS OF DISEASE AND FOR THE PRODUCTION OF ANTI-TOXIC SERUMS

IDENTIFYING MICROBES

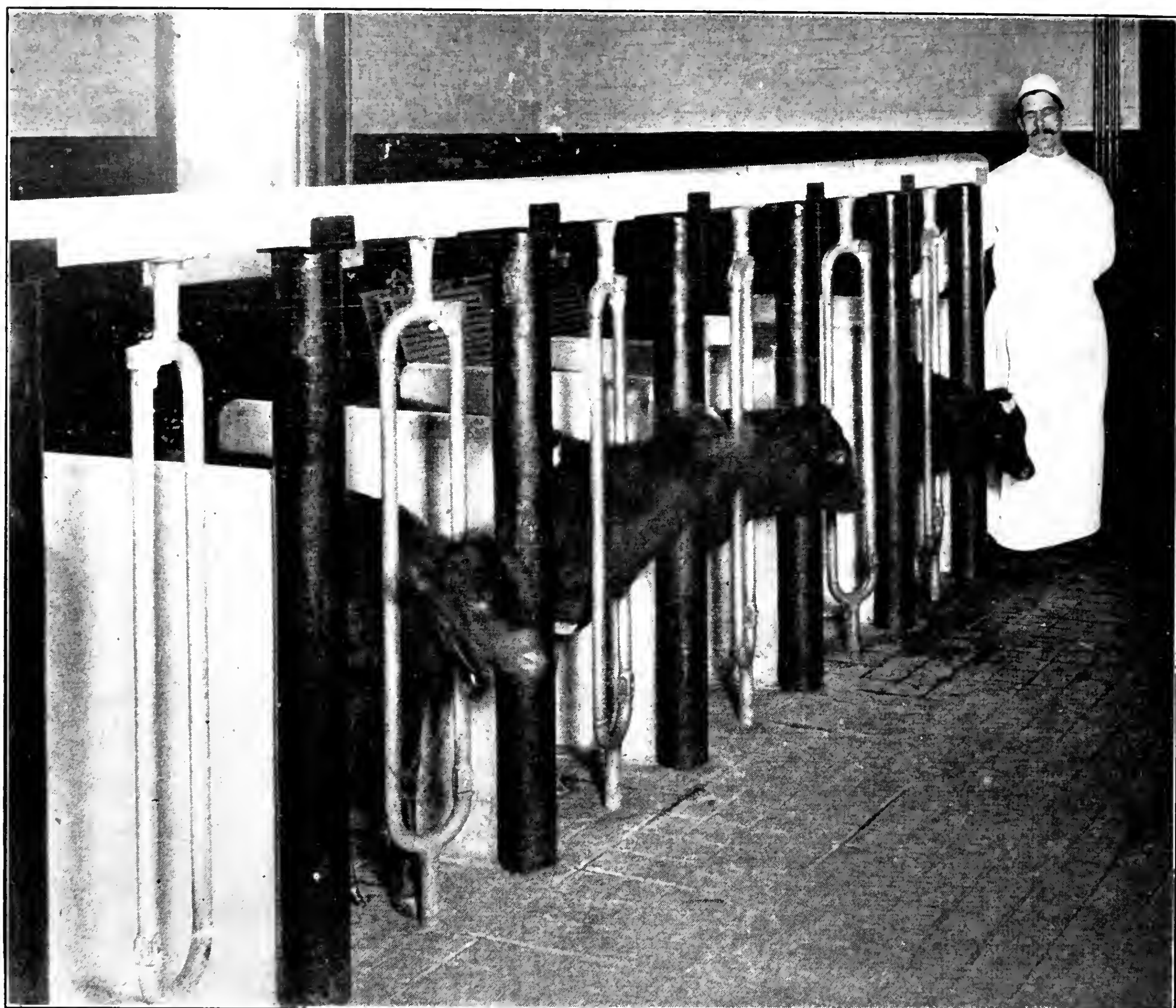
THE SPECIAL GERM OF NEARLY EVERY INFECTIOUS DISEASE HAS BEEN DISTINGUISHED BY SUCH MICROSCOPIC EXAMINATIONS AS THIS

serious. One is warranted in assuming, therefore, that the injection of vaccine against meningitis, especially if only a small first dose of vaccine be used, is attended with little danger of predisposing temporarily to a true attack of meningitis, and that the risks of vaccination for positive carriers of the germ are small as compared to the possibility of developing meningitis without vaccination.

To a certain extent this danger to carriers may be obviated by looking for germs in the nose and throat before vaccination, and, if they are found, by using local treatment till there are no more germs lurking about. In at least six instances, however, in which the nose and throat had the mi-

GRINDING DISEASED TISSUE

FOR THE PREPARATION OF AN EMULSION TO BE INOCULATED INTO ANIMALS IN EXPERIMENTS FOR THE PREVENTION OF CANCER



LIVING VIRUS INCUBATORS

THE BLOOD OF THESE CALVES, WHICH HAVE BEEN INOCULATED WITH SMALLPOX GERMS, DEVELOPS A VIRUS WHICH, WHEN DRAWN FROM THEIR VEINS, IS INJECTED INTO THE CIRCULATORY SYSTEM OF HUMAN BEINGS, MAKING THEM IMMUNE TO THE DISEASE

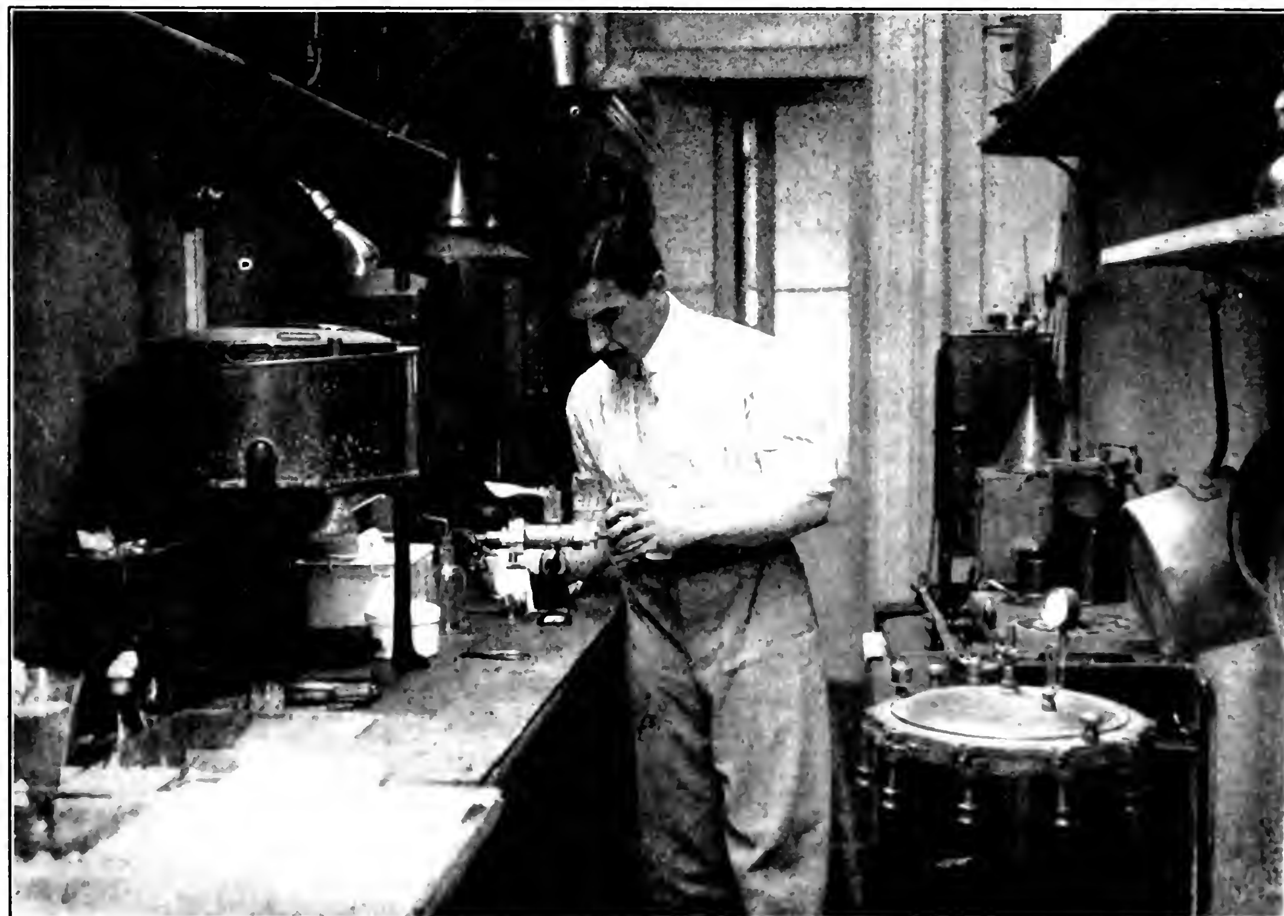
crobes, they disappeared about a week after vaccination without other treatment. The only objection to the use of vaccine is the temporary reactions which, in most instances, are trivial.

Dr. Sophian and Dr. Black are making observations to determine the persistence and duration of the immunity produced by vaccination. They think that the immunity lasts a long time, at least a year.

Prof. J. O. Hirschfelder, of the Cooper Medical College, San Francisco, offers now a discovery that may lead to the production of a simple means by which everybody may ward off and be made immune to the Captain of the Men of Death, as Dr. Osler calls pneumonia. Briefly, Professor Hirschfelder proposes a vaccine for pneumonia.

After a searching investigation and a trial of many methods, Dr. Hirschfelder finally made a solution of the living pneumonia cocci which he had previously digested with some stomach and intestinal ferments. This mixture was then filtered through Pasteur filters.

The pneumococcus, or the germ that infects the pneumonia sufferer, was planted by Dr. Hirschfelder upon veal broth to which sugar, glycerine, and lime were added. Every day these were transplanted, so that the microbes would remain malevolent. To test their virulence, rabbits were infected with them, and thus died quickly. Now to save such animals — for these pneumococci are always fatal to mice, rats, and rabbits, was the doctor's aim. To build up a vaccine strong enough



TWO CORNERS OF THE PASTEUR INSTITUTE IN NEW YORK

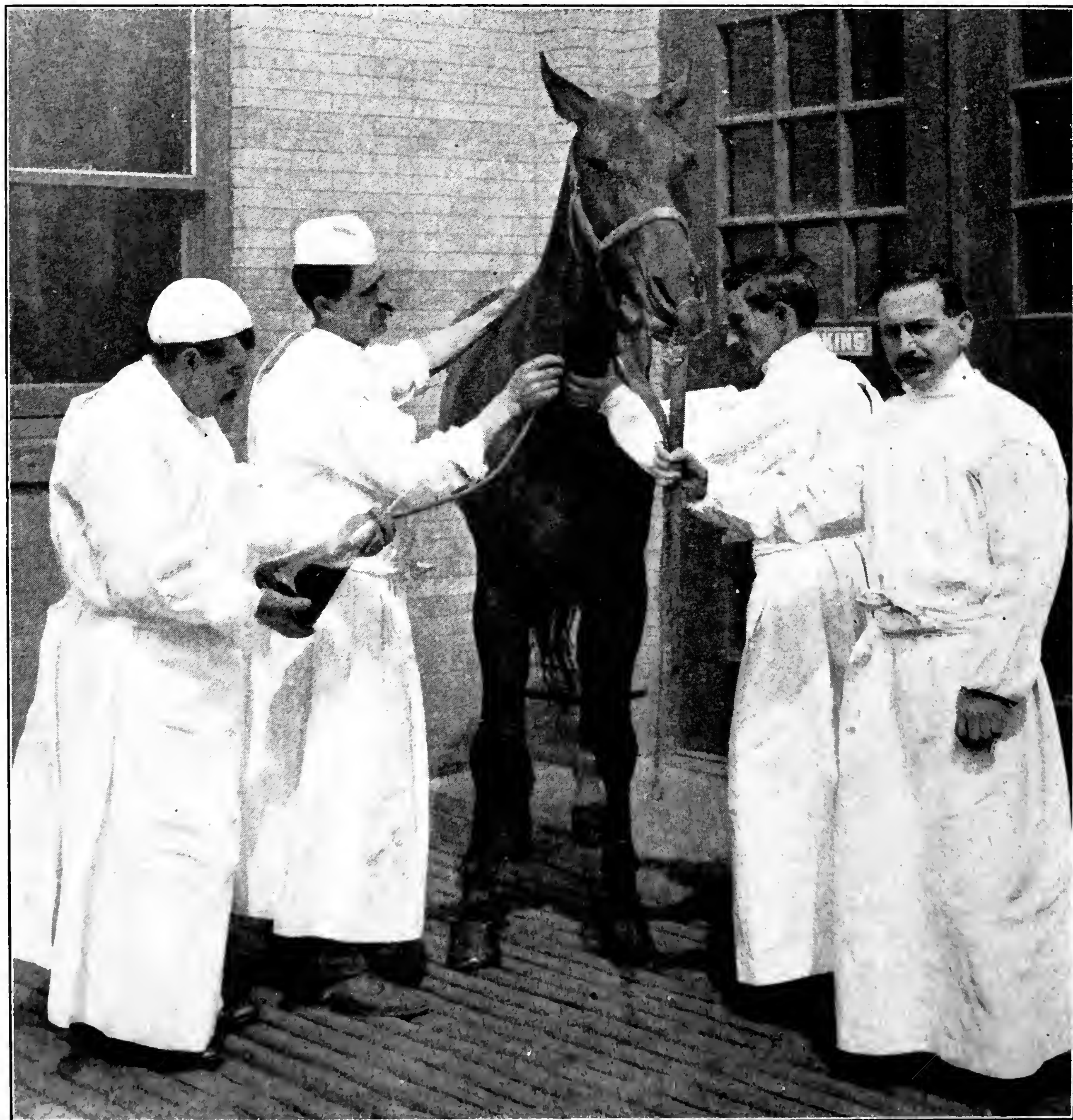
UPPER PICTURE: WHERE EMULSIONS ARE PREPARED FOR THE TREATMENT OF PATIENTS. LOWER PICTURE: PREPARING A LARGE QUANTITY OF VIRUS FOR THE IMMUNIZATION OF SHEEP TO RABIES

to counteract the deadly havoc of such bacteria would be the correct step before trying it on himself or other volunteer experimenters. This, happily, is just what Professor Hirschfelder discovered.

On April 21, 1912, a rabbit was vaccinated with about a teaspoonful of the digested and filtered germs of pneumonia and another rabbit with an ounce. On May 8th, these rabbits and another unvaccinated rabbit were injected with enough deadly pneumonia microbes to kill a mastodon. The unvaccinated rabbit died in forty-eight hours, while the two that had been vaccinated were as lively as ever. When the tissues of the unvaccinated dead rabbit were subjected to a microscopical search, millions of pneumococci were found in them.

Dr. Hirschfelder has since tested his vaccine on more complex animals such as cats, dogs, and monkeys, and his most sanguine expectations have been entirely verified. In every instance — and besides the animals ten men were vaccinated — absolute immunity ensued.

Even more important are Dr. Hirshfelder's experiments with pneumonia it-



EXTRACTING SERUM FROM THE JUGULAR VEIN OF A HORSE

THE BLOOD OF HORSES IS THE PRINCIPAL SOURCE OF THE ANTI-TOXINS THAT ARE USED SUCCESSFULLY TO PREVENT AND CURE INFECTIOUS DISEASES IN HUMAN BEINGS

INOCULATING PATIENTS AT THE PASTEUR INSTITUTE

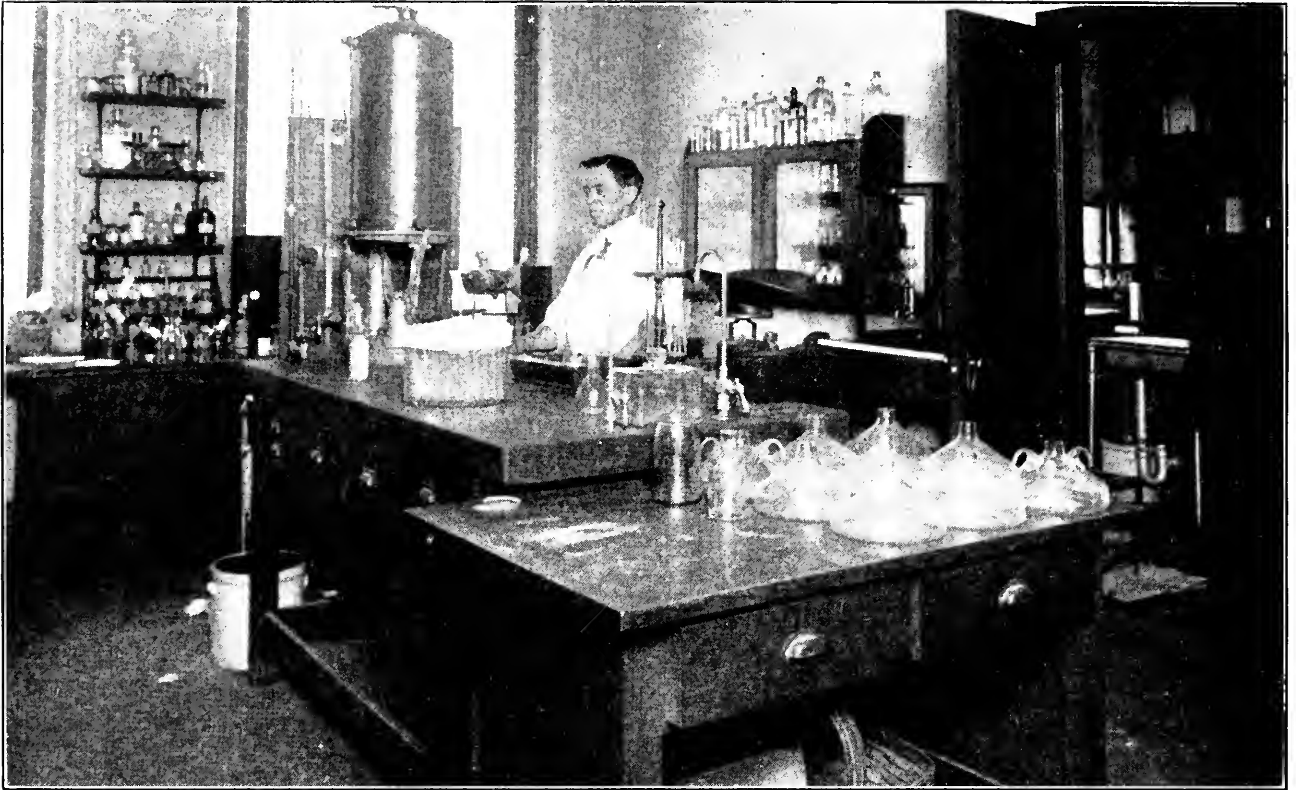
TO PREVENT THE DEVELOPMENT OF RABIES AFTER RECEIVING THE BITE OF MAD DOGS. THE INOCULATION IS REPEATED DAILY FOR EIGHTEEN CONSECUTIVE DAYS.

VACCINATING A SMALL BOY

THE FAMILIAR METHOD OF PREVENTING SMALLPOX INFECTION BY INOCULATING WITH COWPOX VACCINE

INOCULATING AGAINST TYPHOID FEVER

THE NEW METHOD BY WHICH THE COMMONEST DISEASE IN THE ARMY HAS BEEN ALMOST ENTIRELY ELIMINATED



CULTURES OF SERUM READY FOR DISTRIBUTION

THE WHITE TUBES SHOW THE FORM IN WHICH THE ANTI-TOXINS ARE PREPARED FOR USE BY PHYSICIANS

self. Of ten patients treated with an emulsion of washed microbes, seven had a perfect crisis in twenty-four hours, and the other three within two and a half days. This is a wonderful result and, if its promise is borne out in general practice, will work a revolution in the health, happiness, and length of life of the human race.

AN EXPERIMENTAL RAT HOSPITAL

TO TEST THE EFFECTS OF ANTI-TOXINS IN THE PREVENTION AND CURE OF INFECTIOUS DISEASES. THE TAGS RECORD THE PROGRESS OF THE EXPERIMENTS.

TEACHING REAL LIFE IN SCHOOL

A COURSE WHICH FITS BOYS TO ENTER THE TRADES OR THE COLLEGES — THE PRACTICAL ARTS SCHOOL AT FITCHBURG, MASS.

BY
WILLIS B. ANTHONY

"YOUNG ladies and gentlemen of the graduating class," once said the chairman of a school committee, "you have now completed your high school course and have received your diplomas. At last you are prepared for life and are standing on its threshold. Accept our congratulations." He sat down, smiling and nodding to a burst of applause.

"Prepared for life are they?" grumbled a friend of mine, a contractor, as we reached the street after the exercises. "These boys are going into industrial work, and they couldn't build a raft on a sinking ship to save their lives."

A few years later it was my satisfaction to invite my complaining friend to the dedication of the Practical Arts School erected by Massachusetts in connection with her normal school in Fitchburg. He found there boys from twelve to fourteen years of age, learning the world's way of doing things. Among real workmen, they were doing real work, in a real way.

The Practical Arts School trains young men teachers. It instructs journeymen and high school graduates so that they can make school life more like real life for those two critical years when boys waver between dropping school as soon as the law permits or continuing in the high school. To give the young men opportunity to observe and to teach practical work, one hundred and fifty boys and the same number of girls are taken. The girls' work is distinct from the boys'.

Four years ago, the Practical Arts School opened for Fitchburg boys and girls who, having finished their sixth grade, preferred to enter it rather than to continue in the corresponding seventh and eighth grades of the city schools. Double the anticipated number of pupils were enrolled.

From the first the school has offered a choice of four courses: the literary, the commercial, the household arts for girls, and the practical arts course for boys. Every course covers the work essential for entrance to the city high school and gives ten additional hours to work appropriate to the course. Because of this extra work the school day is six hours long.

My story is only of the boys in the practical arts course.

Business men visit the school to see the youngsters on the job. "We have heard strange reports of boys engaged in real work in the upper grammar grades. We want to be shown," is their challenge.

"I suppose you will tell us next," said the representative of a Canadian board of trade, "that boys are going to paint your side walls and ceilings, as we saw painters doing as we entered the building."

Later, the "painters" (a year under high school age) were told that another visitor had mistaken them for working men. Everybody laughed. It has become a common joke. The taller boys have often been mistaken for men at work inside and outside the building. In paint-covered overalls, jumpers, and caps,

A CLASS IN CONCRETE WORK

BOYS OF THE PRACTICAL ARTS SCHOOL OF FITCHBURG, MASS., LAYING THE SCHOOL WALKS UNDER THE SUPERVISION OF A TEACHER WHO IS A MASTER MASON

balancing on a single plank staging, they do look like men.

"Best of it is," added the visitor with enthusiasm, "they seem to work like men, judging by that ceiling which they have just painted."

"They do work like men," said the faculty member in charge. He was a contractor, painter, and civil engineer before becoming a member of the faculty. "My eighth graders were figuring with me only last week," said he, "that the boys have laid close to a ton of white lead in two and a half years."

In the wood-working department, boys, working with men students and instructors, have made the cooking-tables and cabinets needed in the domestic science department, the sanitary clothes-racks for all the hats and coats in the school, and the fifteen teachers' desks used in the building. They have taken up and relaid floors, have built partitions of wood and brick, have constructed and painted all the scenery and property for their plays and pageants.

Wood and metal working is taught by a practical man. He served as a journeyman, foreman, and contractor in both trades before his services were secured for the school.

The simple household repair department particularly interests parents. The school had hardly opened last year when boys came from all directions pushing and pulling lawn mowers. A mechanic instructed the young men and boys how to put the machines in condition for late autumn and spring use. All dripping faucets on the premises have been repacked, window lights reset, screens stretched and painted, tinware soldered, chairs reseated, school furniture scraped and refinished, and many similar household repairs made in a businesslike way in the household repair department.

A washing-machine in the home of one of the boys was broken. The family was supported by his and the mother's efforts with the machine. He wheeled it to school and carried it back repaired.

One efficient expert said he was glad that our teachers were practical workmen fresh from the trades. "It means that their classes of young men are going out to put something like the real thing into school shops. The boys that these young men came in contact with in this school and elsewhere who become industrial workmen will not carry into the trades of their choice out of date, school-made methods that are outgrown and impossible to-day in the world's work."

Concrete walks were needed around the new building. A master mason became a temporary member of the faculty. Two

PRACTICAL FORESTRY AS A SCHOOL EXERCISE

MOVING A "CLASS TREE" TO CLEAR THE SITE FOR A NEW DORMITORY, THUS TURNING THE OUTDOORS INTO A SCHOOLROOM FOR LESSONS IN WORKADAY TASKS

hundred dollars' worth of walks were laid under his direction. A master printer and bookbinder is a member of the faculty. Ten acres of hillside property have been recently added to the Normal School grounds. The upper portion demands attention. It is overgrown with bushes and saplings. It promises interesting experience in simple forestry. Walls have already been moved, trees trimmed and transplanted. Several thousands of dollars' worth of grading is being done. A transit is in frequent use in getting levels and laying lines. Gardens, playgrounds, and an athletic field for the league teams are being laid out. A large greenhouse is being built. The young men and boys are doing this work by efficient, up-to-date methods under practical men long experienced in their various trades.

At the Practical Arts School, as in real life, books are supplementing, not supplanting, personal experiences. Instead of spending their time studying books, the boys are acquiring more permanent knowledge, first by reliving, then by reading and telling of, the activities of those whose experiences are worth knowing.

With tradesmen on the faculty and trade methods in the school, it would seem that the purpose of these tradelike experiences was to start boys in the trades, but the majority of the boys are going to college. The same experiences that are helping some boys into trades are fitting others equally well for college and for later life.

The school stands squarely for a general rather than a special form of education for boys under sixteen years of age. Up to this age the chief aim is to teach boys, at first hand, of the world's work throbbing about them. At last, culture begins where culture used to stop, with a knowledge of the world-builders of the present, their vocations and their avocations, then works back through the pages of the past. The motto of the school is "to learn the living of the world of to-day."

No visitor at the Practical Arts School, since the first year's rush of satisfying immediate needs, ever leaves with an impression that we seek only to train muscles. More and more the mental activity of neighboring business is being brought into the school. More and more the boys are receiving practical guidance in applying their minds to the materials and methods of business, that they may develop industrial habits of mind.

Last year school men came with a prejudicial attitude toward the school. They had heard that it stood only for manual labor. Their impression was soon corrected. They happened on a class planning a drawing-board cabinet to

A LESSON IN BUSINESS METHODS

PUPILS OF THE EIGHTH GRADE COMMERCIAL DEPARTMENT PAYING OFF STUDENTS WHO HAVE WORKED OVERTIME AT THE MANUAL TASKS OF THE SCHOOL

hold the hundred school-made drawing-boards. Arguments among the boys over the arrangement of the boards, the size of the drawers, and the kind of joints were to the point. "They remind me of drummers arguing the advantages of their ideas over a rival's in the market," said one school man. "That was a worth-while debate," said another. The difference between a boy's first scheme and the last plan finally arrived at by the class was a saving of four dollars' worth of material and fifteen feet of space to be occupied by the cabinet.

Until recently a member of the faculty owned a large farm. One afternoon in a drizzling rain I found the boys working merrily and measuring the inside of a two-horse cart. "They are finding the number of cubic feet in a cart load of dirt. They have timed the filling and moving of one load," explained the instructor. "Now, with their plots showing the necessary cut and fill in grading this lot, they are figuring how much it will cost to bring the new garden up to grade." This is the difference between the real arithmetic being done by the boys in every department and the text book unrealities of the ordinary school room. "It required twenty-nine minutes to dig and move thirty-two cubic feet. We know because we have just tried," said one of the boys. "How long will it take to move that hill of 20,000 cubic yards?" In the text book this same problem would read, "If it takes twenty-nine minutes, etc." The imaginative "if" marks the difference between real business arithmetic and the make-believe problems of the text-books that are commonly used.

The greatest surprise to visitors is the zeal shown by the boys, more surprising, perhaps, because with but few exceptions no results of their work have been carried home. Not long ago a friend of mine visited me. He noticed the enthusiasm shown by the boys in the draughting rooms and shops.

"Say, this is great," he said. "I have coached football and baseball teams and can understand their ginger for that sort of thing, but I never expected to find anything of the kind in school work other than athletics."

That night we talked over this spirited attitude shown by the boys. The boys appreciate a chance to live — especially the life that is going on around them. With us, as in athletics and real life, they strive for a definite goal in each job that they attack.

The making of designs, benches, business-like and critical writings is only an incidental product. A higher human product is the school's aim.

A UNIVERSITY THAT RUNS A STATE

HOW WISCONSIN'S STATE UNIVERSITY WRITES MANY OF ITS LAWS, DIRECTS MUCH OF ITS PUBLIC SERVICE, INCREASES ITS CROPS, MAKES BETTER FARMERS AND HOUSEWIVES, CONDUCTS CORRESPONDENCE COURSES, AND CARRIES A COLLEGE EDUCATION TO THE DOOR OF EVERY CITIZEN WHO WANTS IT

BY

FRANK PARKER STOCKBRIDGE

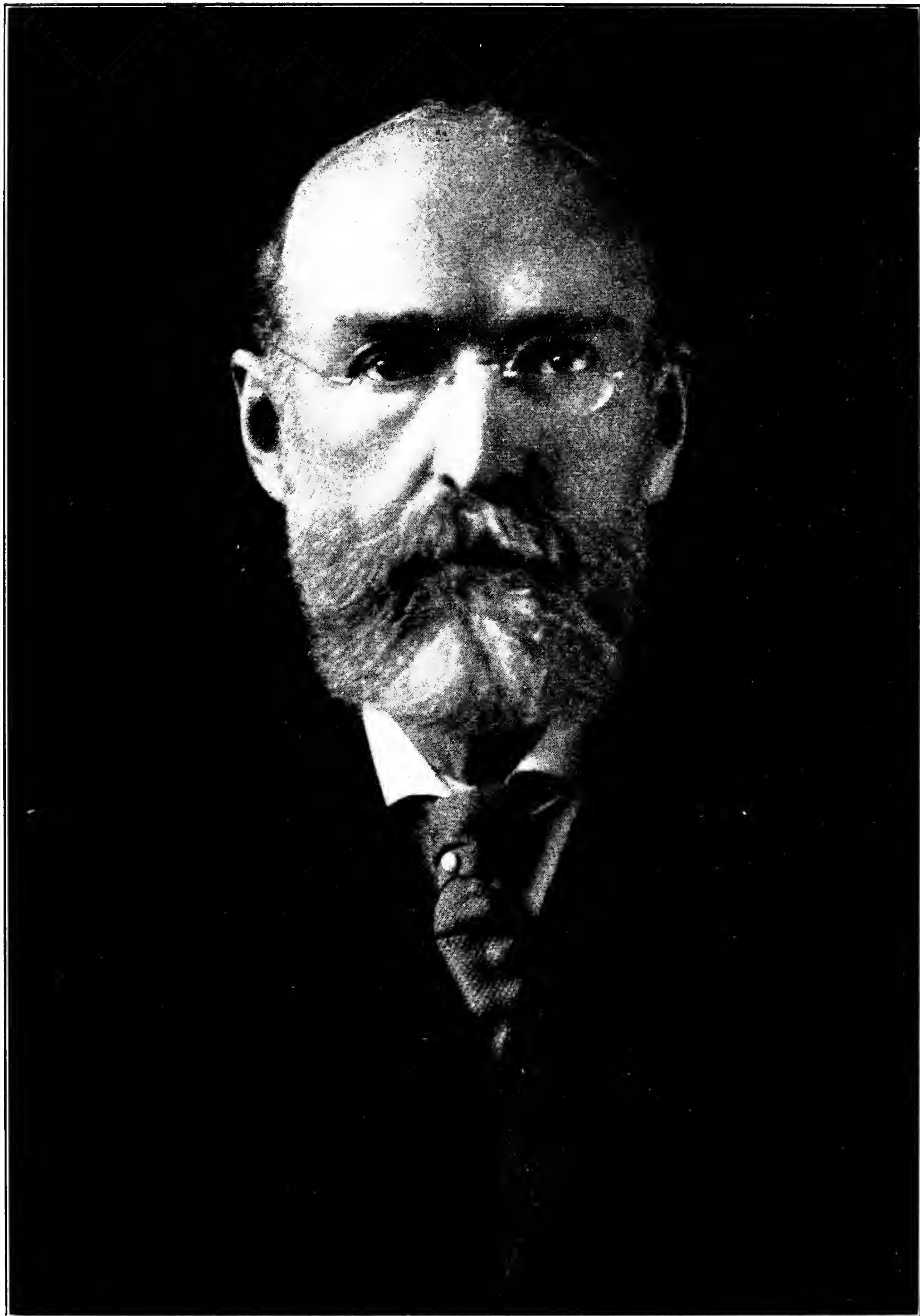
WISCONSIN, in a quarter of a century, has raised itself from a poor state to a rich one, has taken the lead in agriculture, and is setting the pace for the rest of the United States in the economic reforms which are the objects of all progressive politics to-day. It has accomplished these things without the aid of much of the new-fashioned political machinery that elsewhere is regarded as essential to progress. It has never had the initiative and referendum, for instance, or the recall, or woman suffrage. But it has had the State University, through which alone among the states Wisconsin has applied the scientific method to legislation. The representatives of its people act in coöperation with the teachers of its people, and the legislature translates into statutes for the common welfare the results of the scientific investigations of the University faculty. And back of both legislature and University stand the people of Wisconsin, gaining knowledge from one and economic freedom from the other, each in a degree unknown in most other parts of America.

The first impression one gains at Madison is of the intimate connection between the State Capitol at one end of the city and the University at the other end. The second impression, that soon becomes a conviction, is of an institution of learning that deals with the living present and the inevitable future instead of with the things of dead yesterdays; an institution, moreover, whose student body includes, besides the few thousands in daily attendance upon its lectures and classes at Madison, in some degree every individual of the two and a half million men, women, and children in the state.

I rode down to Milwaukee with Dr. Wayland Johnson Chase, associate professor of history. We were going to attend a dinner in celebration of the close of the year's work by the Milwaukee students in the University Extension Division. Several hundred of them, young mechanics employed in the great machine shops, salesmen and clerks from stores and business offices — workers who had never even seen the University buildings — turned out to express the appreciation they felt for the aid the University was giving them in solving the problem that bore directly upon their own lives and work.

"How on earth can you make history interesting to these people?" I asked Professor Chase.

"Because we try to teach history in terms of what is going to happen in Wisconsin day after to-morrow," was the reply. Wisconsin University is not yet entirely free from the ancient traditions of education for the sake of education. Nor does it neglect the so-called cultural



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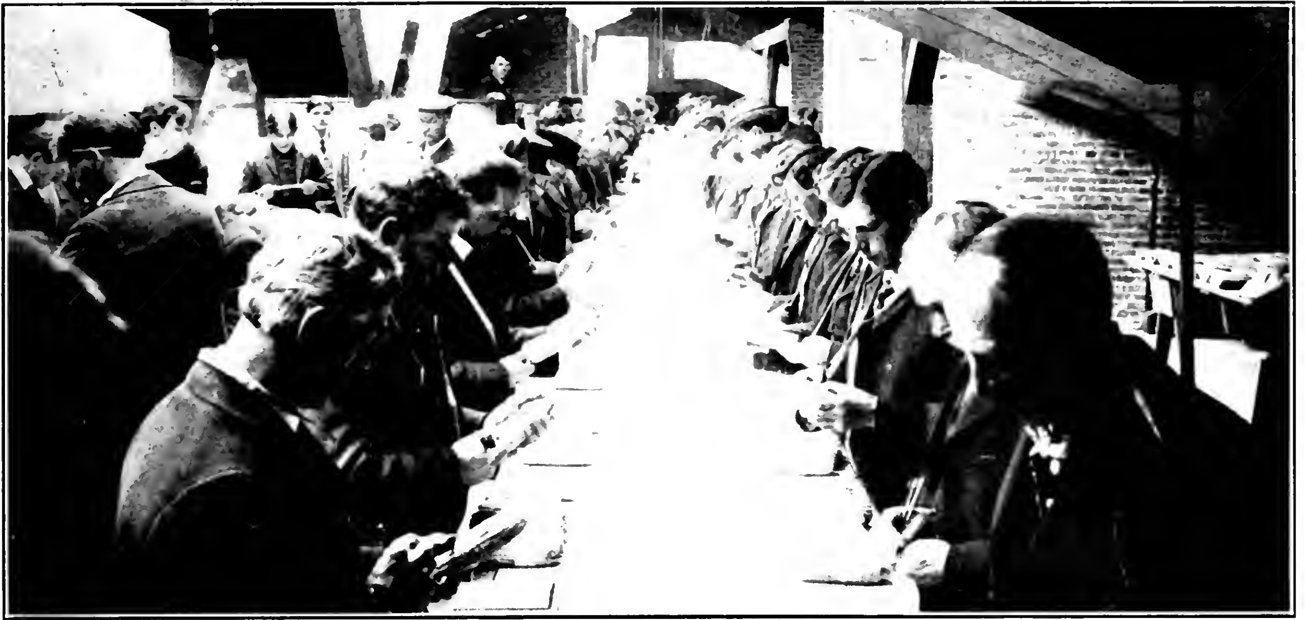
DR. CHARLES R. VAN HISE

UNDER WHOSE PRESIDENCY THE UNIVERSITY OF WISCONSIN HAS BECOME AN INTIMATE EDUCATIONAL FORCE IN THE LIVES OF NEARLY ALL THE PEOPLE OF THE STATE



TEACHING FARMERS HOW TO JUDGE CORN

ONE OF THE MANY COURSES AT THE UNIVERSITY OF WISCONSIN THAT BRING ADVANCED EDUCATION TO THE DIRECT SERVICE OF ALL KINDS OF PEOPLE

studies, for those who desire them. But the larger programme of the University looks toward the interests of the 99 per cent. who neither care for nor are qualified to undertake the study of the things that are popularly supposed to be the essentials of a University education. This programme was laid down by President John Bascom more than a quarter of a century ago. Its development until the University actually comes into contact with every inhabitant of the state has been of very recent growth — a growth that is still going on at increasing speed.

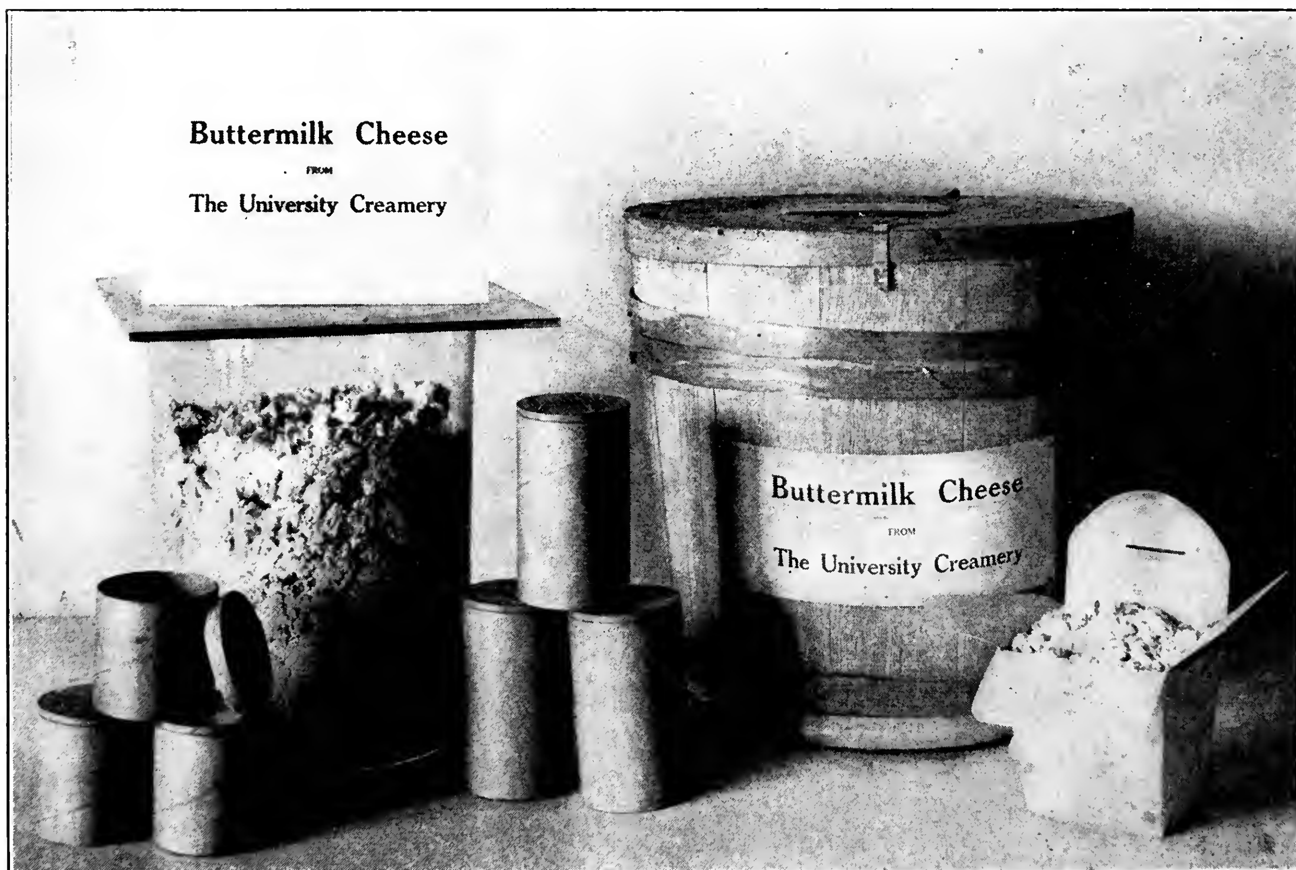
To-day the University offers every man, woman, and child in Wisconsin, education

LEARNING TO APPLY THE BABCOCK TEST

WHICH, BECAUSE IT REVEALS THE PROPORTION OF BUTTER-FAT IN MILK, HAS ENABLED FARMERS TO ELIMINATE UNPROFITABLE COWS FROM THEIR HERDS AND HAS THEREBY SAVED THEM MANY MILLIONS OF DOLLARS

of the kind that can be translated into dollars and cents. And every problem of community life, from the smallest village to the entire state, is recognized as something the University must be prepared to show the people how to solve in the most efficient manner. The University, either as an institution or through individual members of its faculty, is taking an active share in every form of community interest.

This new idea in education began in the community was getting no apparent practical benefit. Therefore, in 1885, the University regents asked Professor W. A. Henry, Dean of the College of Agriculture, to devise a plan that would give practical agricultural education to actual farmers and produce tangible results that everyone could see. Professor Henry, with many misgivings, established the "Short Course" in agriculture, which began immediately to make the University of Wisconsin famous.



AN INVENTION THAT SAVES A FORTUNE A YEAR

THIS CHEESE, INVENTED BY TWO PROFESSORS OF THE UNIVERSITY OF WISCONSIN, SAVES THE LAST WASTE IN BUTTERMAKING BY UTILIZING THE BUTTERMILK, AND ADDS HUNDREDS OF THOUSANDS OF DOLLARS YEARLY TO THE VALUE OF FARM PRODUCTS IN THE UNITED STATES

Agricultural College, and through the Agricultural College the most definite and tangible results have been achieved. Twenty-eight years ago the Agricultural College was doing just what all other agricultural colleges of that time were doing and what many are doing yet — turning out, after a four-years' course, small classes of men with a great deal of theoretical scientific knowledge of the physics and chemistry of agriculture, but no farmers. It became increasingly difficult to get appropriations from the legislature to maintain a college from which the A four-months' course in practical farming, given during the winter, when the young farmers could get away to attend the classes, and condensing into two such winter sessions the practical and a considerable proportion of the scientific side of farming, was Dean Henry's plan, and it is still in operation, with classes growing larger and more enthusiastic year by year. It was what the farmers needed and what they wanted. The "Shorthorns," as the short course students are nicknamed by the supercilious students of the four-year courses, now number nearly five hundred every year,

A CLASSROOM OF THE UNIVERSITY OF WISCONSIN

THE PROFESSORS TAKE THEIR STUDENTS TO PRACTICAL DEMONSTRATIONS OF ORCHARD SPRAYING AS WELL AS THROUGH TEXT BOOK FORMULAS ON HORTICULTURE

and nearly four thousand short course graduates are applying on their farms the improved methods of agriculture which they learned at the University.

In the College of Agriculture has been built up a faculty of practical men, professors who are farmers and farmers who are professors, with a practical farmer and University graduate, Dr. A. J. Russell, as the successor to Dean Henry, who recently retired with the title "emeritus." The short course student gets his share, all he can use profitably, of laboratory work, lectures, and classroom instruction. But his real university work is done in the dairy buildings, where the University's own big

SHORT COURSE STUDENTS INSPECTING PRIZE LIVESTOCK

ON THEIR ANNUAL TOUR OF THE FARMS OF THE LEADING BREEDERS OF THE STATE

herds of pure-bred dairy cattle furnish the milk for the University creamery and the University cheese-factory; in the live-stock pavilion, where he learns by practical experience how to judge farm animals; in the machinery building, where he learns how to run a gasoline engine, take it apart and put it together again, or to repair a threshing machine or mend a plow; and in the agronomy building, where he is taught the

BUILDINGS OF THE UNIVERSITY
AT MADISON, WIS., LOOKING ACROSS THE PORCH OF THE AGRICULTURAL BUILDING TO THE MAIN HALL

difference between good seed and bad. His classroom work deals with such subjects as the proper rotations of crops, the economical arrangement of farm buildings, simple methods of farm accounting, ditching and draining — practical things for the practical man.

The professors have got to know a great deal more about churning, for example, than the boy from the dairy farm has been able to pick up from the buttermaker at his local creamery. Indeed, they have to know enough about it to conduct classes for the buttermakers themselves, showing them not only a way to make butter but the very best way of all. They cannot rest with telling the farmer how to get the best results from his farm land — they must be able to demonstrate that their way is the best way by getting larger crops with less labor on the University's own thousand-acre farm than any of the students has been able to get on his own farm.

Instead of putting an end to research work, as the opponents of the short course feared the attempt to give practical instruction would do, it has stimulated it immensely. The "practical" students brought to the faculty problems that had to be solved, and as a result Wisconsin University has contributed to the world's store of knowledge some of the most valuable discoveries which are now of general application. I told in a previous article in the WORLD'S WORK something of the importance to the dairy industry of the whole world of the discovery of the test for butter-fat in milk, made by Prof. S. A. Babcock at the University of Wisconsin in 1890. With this rank the moisture test for butter, the Wisconsin curd test, the Farrington acid test, and the Hart casein test, all of great value in dollars and cents to dairymen the world over. And two members of the faculty have just discovered, after several years of experiment, how to utilize the last remaining dairy waste — the buttermilk. The Wisconsin University buttermilk cheese, directions for making which have been published by the Agricultural College, will eventually create a value of several hundred thousand dollars a year out of what was formerly practically thrown away.

The Agricultural Extension Division brings the University directly in contact with almost every farmer and farmer's family in the entire state. The Wisconsin Agricultural Experiment Association, fifteen hundred strong and still growing, composed of graduates of the short course who own their own farms, and having for its object the improvement of the quality of all the grain produced in the state, is a direct tie between the University and the farmers who have not been to college. In addition to these volunteer workers for

better farming the University maintains centres in different parts of the State, each in charge of a farm expert whose business is to help the farmers in his district solve their practical problems as they arise. Every state and county institution — insane asylums, almshouses, and prisons — has attached to it a demonstration farm, in charge of which is one of the local superintendents, where object lessons in the best farming methods are given for the farmers of the whole county. At frequent intervals farmers' picnics at these demonstration farms are arranged. The farmers and their wives and families drive in from miles around, meet one another and get acquainted, and crowd around the superintendent or some visiting expert while he explains the reason that one row of corn produces twice as many bushels as the next.

A personal interest is given to these object lessons by planting corn and other grains from seed selected by different farmers, one row of every farmer's seed, and then on picnic day pointing out that Jones is not a very good judge of seed corn, for Smith's corn, planted in the next row, produced a much larger crop. An object lesson of this kind is doubly convincing. It drives home to the farmer the importance of good seeds in dollars and cents and, since the demonstration farm is in his own neighborhood and right where he can see everything that is going on, it removes all suspicion that there is some kind of a trick involved in growing the big crops which the University bulletins tell about.

The University coöperates with individual farmers in a variety of ways. Model plans for farm buildings of various styles and degrees of cost, have been prepared by the Agricultural Engineering Department and blue prints, from which the local builder or the farmer himself can construct buildings best adapted to housing his live stock, his crops, or his family, are furnished free to all farmers that apply for them. Recently the University engineers prepared a set of moulds for use in the construction of concrete silos. The principal expense in concrete construction is in making the wooden moulds into which the concrete is poured. The University rents these moulds to groups of farmers, with detailed instructions for their use, thus enabling a farmer to build for about a hundred dollars a silo that will last many lifetimes without repairs and that otherwise would cost him nearly three hundred dollars.

The University is coöperating with a limited number of farmers in keeping exact accounts of the cost of every farm product in money and time, so that the profit or loss on different crops under different conditions can be computed and their general application to the farms of the entire state can be deduced. In coöperation with the County Fair Associations and the County Farm Superintendents, young people's corn contests are held annually and the boys who get the best results from the seeds furnished by the University are given a chance to spend two weeks at Madison during the winter to learn more about modern farm methods. And such services as seed inspection, the organization of live stock breeding associations, the testing of butter and cheese and milk and cream, demonstrations of the best methods of orchard spraying, working out of plans for draining swamp lands, conducting experiments on the stump lands in the northern part of the state to determine the most efficient and economical method of clearing these valuable areas, furnishing lecturers on agricultural topics to farmers' institutes, are a regular part of the routine of the agricultural extension service.

The women of the farm also are helped by the University. The Home Economics department at Madison brings to the College young women from every part of the state to learn new methods and better methods of household management. Teachers go from it to give lectures and demonstrations — on such subjects as home management, foods and cooking, home decoration, nursing, and the care of children — at farmers' institutes, county agricultural schools, and elsewhere. And once a year, in February, hundreds of farmers' wives and daughters accompany their husbands and fathers to Madison where, while the men folk are busy with the ten days' "farmers' course" of lectures, demonstrations, and exercises in practical agricultural science, the women are down

at the Home Economics building, where Professor Abby L. Marlatt and her assistants tell them and show them how to save time and work and money in the management of the farm home. The women in charge of the Home Economics course must be able to prove that they can bake a loaf of bread better, sweep the parlor quicker, or cook a farmhouse dinner with less fuss and expense than any of their students, no matter how experienced. I do not know which is the more interesting — to watch the farmers, gray-bearded men many of them, eagerly trying to learn how to tell good seed corn from poor, or to see their wives, equally eagerly, delving into the mysteries of the fireless cooker. Fifteen hundred farmers and their wives attended the "farmers' course" in 1912.

What does it mean to the farmers of Wisconsin in dollars and cents?

Here is one typical illustration. Ten years ago Mr. H. E. Kruger, of Beaver Dam, applied for admission as a student in the short course in agriculture at the University. He told his story to Professor R. A. Moore, head of the Department of Agronomy, who told it to me.

"Young Kruger — he was then twenty-three — had never cared for farming. He had left the farm where he was born and had gone to the city. Then his father had died and his widowed mother had asked him to come home and take hold to pay off the mortgage on the place. He put in two winters here in the short course, and all the work and brains he could apply on the home farm. He was one of the first members of our Agricultural Experiment Association. Long ago he paid off the mortgage and from his 1911 crops he had sold more than $18,000 worth of grain up to April, 1912. And a few months ago Governor McGovern appointed him a member of the State Board of Agriculture."

What does the State get for the $400,000 it spends yearly on agricultural education?

In the ten years from 1900 to 1910 the value of all farm property in Wisconsin increased by more than 74 per cent. although the number of farms showed an increase of less than 6 per cent. and their total area less than 10 per cent. The number of its cows increased 47 per cent. in these ten years; the annual value of its butter output, 70 per cent., its cheese product 86 per cent., and its yield of corn from 25 bushels an acre, the average for the whole country, to 36 bushels an acre.

The University gives to the city and village dwellers educational services equal to those given the farmers. "I would have no mute, inglorious Milton in this state," said President Charles R. Van Hise recently, and he is making his words good.

Dr. Louis E. Reber, Dean of the Extension Division, is the moving force behind probably the largest and most widespread scheme of general education for all the people that any college or university has thus far attempted to put into practice. It is now literally true that there is not a man or a woman, a boy or a girl, of the two and a half million people in Wisconsin, whom the University is not prepared to teach, either directly or as a member of a group, anything he or she wishes or needs to know. Probably this record is unmatched in all the other institutions of learning in the whole world. There is something inspiring in this thought of a university with the whole state for its campus and the whole population for its student body. It is a university living up to its name.

The demands upon the Extension Division are constantly heavier than it can meet by any possibility. From a staff of seven instructors in 1907 and an appropriation of $20,000 it had grown in 1912 to $150,000 and a staff of ninety-eight professors and teachers; and even then it had to call upon practically the entire University faculty and many of the resident students for assistance.

Engineering comes first, not in number of students but in practical, tangible results of the instruction given in the Extension Division. Milwaukee is the great manufacturing city of Wisconsin. Oshkosh and La Crosse are also manufacturing centres. Each of these is the centre of an extension division district, with a district representative of the University, a staff of field organizers and instructors permanently located there and holding regular classes, morning, afternoon, and evening. To these classes flock the young mechanics —

and many of the older ones as well — from the great engineering works and from the smaller factories. They get practical courses in shop mathematics, drawing, mechanics, strength of material, gas engines, structural engineering, and allied subjects. Fifty-seven classes in these subjects meet the instructors regularly at weekly or semi-weekly intervals for from two to four hours of solid work. There are no more enthusiastic, no more earnest, students than these, every one of whom gets out of his classes something that proves its value by the figures in the corner of his weekly pay envelope.

One of Dean Reber's innovations was the establishment of extension classes in business organization and salesmanship. Storekeepers and small tradesmen find in this course something that they, too, can translate into dollars and cents. Merchants and bankers send their clerks to these classes. The fundamental principles on which any business, to be successful, must be conducted, are taught in a way that the most untrained mind can grasp. Some of the results have been surprising. One young man, a salesman in a small shop, wrote to Dean Reber that he had added $1,000 a year to his income through the wider knowledge he had gained in the extension class in business organization. Besides these extension classes special courses are arranged from time to time for men in special trades, such as the annual Bakers' Institute for the instruction of journeymen bakers. Through the Extension Division definite steps are being taken to establish vocational classes in the high schools and graded schools throughout the state, just as the Agricultural Extension Division is getting agricultural courses established in the rural schools. Compulsory continuation schools for apprentices have been authorized by law.

The University offers correspondence courses in agriculture, business and industry, electrical, mechanical, and civil engineering, mechanical drawing, surveying, highway construction, French, Italian, Spanish, German, Greek, and Latin; ancient, medieval, modern, American, and European history; home economics, political economy political science, sociology, philosophy, education, mathematics, English language and literature, bacteriology, botany, geology, chemistry, astronomy, law, pharmacy, and music, as well as special correspondence courses for teachers who wish to review their normal school work in preparation for promotion examinations.

To-day, the University of Wisconsin is teaching, by correspondence, more than six thousand students scattered throughout the state, and the testimony of the professors and instructors in charge of this work is that their correspondence students on the whole work harder and learn faster than the regular resident students. They are not stereotyped, mimeographed lessons, but the instruction is in each case in the form of direct personal communications between the teacher and the students. The students are given full university credit for successful work in these correspondence courses, although at least two years' residence at Madison is required of candidates for bachelor's degrees. But the student who can spare only two years may spend his freshman and sophomore years at Madison, continue his studies from farm or factory, shop or office, and graduate with his class. Or he may prepare himself to enter the junior class at Madison and graduate in two years.

The University extends its interests to groups of citizens — women's clubs, literary societies, institutional churches, Christian associations, social settlements, labor unions, farmers' clubs, professional and business men's associations. The University offers all such groups some service from its store of knowledge. Is it a debate on the tariff, or single tax, or whatnot, the University Extension Division, co-operating with the state library and the legislative reference bureau at the state capital, will send a box of books, a file of papers and documents — all the available information on the subject, so arranged as to be easy of access and comprehension. Does a high school or a body of citizens meeting in the schoolhouse want to learn all there is to be known about any subject from ancient history to aeronautics, the University Extension Division sends its lantern slides and either a draft of the lecture to go with them, or the lecturer.

The Extension Division is actively creating new groups of citizens whom it can reach still more directly and continuously with its educational work. This is the social and civic centre movement — the movement which has for its object the opening of every schoolhouse, twelve hours a day, seven days in the week, and fifty-two weeks in the year as a meeting place for social contact, education, and civic development by all the people of every school district. Now in all the cities and towns and larger villages and in many of the remote rural districts the schools are open every night and every Sunday. The people gather there — men's clubs, women's clubs, first voters' clubs, general gatherings of all ages and both sexes — to talk and to read, to play games and to dance, and above all to learn, through mutual discussion and through lectures and object lessons provided by the University, how to live their community life in the true community spirit and how by helping one another to help themselves.

The Department of Welfare and General Information of the University Extension Division makes social surveys that determine the limits of community influences of various kinds. It maintains also a Municipal Reference Bureau, to help city officials and civic organizations that wish better conditions in their municipalities.

Out of such a close connection between the State University and the people as individuals or in groups, there has developed, logically and naturally, an intimate connection between the University and the administration of the entire state. Sixteen University professors and instructors serve both the University and the state and receive pay from both. Thirteen other professors serve on state commissions without pay. Four state officials, paid by the state and performing administrative services, hold unpaid positions on the faculty of the University, and thirteen of the ablest and strongest men of the University are constantly being called on by the state for an immense range of varied and valuable labor for the commonwealth.

It is to the University that the legislature of Wisconsin goes for exact information on which to base new laws for the economic uplift and regeneration of the people. It is the University men who are administering the machinery of the state government.

The people of Wisconsin are learning the value of exact scientific information and its application, not only to the affairs of the individual, but to those of the whole community. They are accomplishing a social and political and economic evolution upon the basis of an educated, thinking, intelligent people.

ADDISON BROADHURST, MASTER MERCHANT

CHAPTER IV

A SHORT NOVEL OF BUSINESS SUCCESS

BY

EDWARD MOTT WOOLLEY

IN THE fall of my first year in business I suddenly realized that I needed more room. My sales for the month had exceeded six thousand dollars, an extraordinary showing considering my capital and operating complement. You can imagine that we sold goods rather fast. Before I tell you how I got the people coming, I want to give you, briefly, some events with a bit of excitement attached.

Of course I had expected all along to acquire more room in due time, but I had not anticipated needing it so soon. There

was a vacant lot on one side of me, and I believed I could induce the owner of this property to put up a building, of whatever height he might elect, and lease me the ground floor, with an option on some of the upper floors.

Just about the time I began to think seriously of approaching the owner of the empty lot, however, I read in the paper one morning that the parcel had been sold to a corporation that already had plans under way for a retail clothing store and haberdashery. A six-story building was projected.

I went at once to consult Higgins. "There's only one thing to do," he said. "Get hold of that three-cornered space on the other side of you, and get hold of it quick. There's a grocery store in it now, I believe."

"Yes — Barson Brothers. But they've got a lease that runs for two years from October."

"Perhaps you might buy them off," he suggested.

"I haven't the money," I returned; "and even if I had a safe full of cash I doubt if they would give up their lease. They are making money pretty fast where they are."

"Then sell your own lease and move to bigger quarters," he proposed.

"I've got one of the best locations on the Square," I protested. "It's a truly strategic site. I'm not sure I could get anything else desirable in that vicinity; and now that this new building is announced, the whole Square will tighten up. There'll be a sudden demand for selling-space — mark what I say! I tell you, Hig, I was rather shrewd in working out a location up here — but I wasn't quite shrewd enough. But there's a fortune awaiting me at the Square, and I've got to have room — ground space, too; that's all there is to it."

I didn't pay much attention to the store that day, but I did a powerful sight of thinking. By evening I had made up my mind that, however much I was corked up at present, I'd get busy on the future. I decided to ask my landlord to put up a higher building on the site of my one-story store, and I decided also to get a lease on the quarters occupied by Barson Brothers, dating from the expiration of their present lease. If the Barsons were not shrewd enough to look after the renewal, I argued, against my conscience, it would be their own fault when they woke up and found that Addison Broadhurst had captured their quarters by strategy. Higgins, however, questioned the ethics of my proposed coup.

Unfortunately, the owner of the property, a Mr. Spooner, lived in Chicago.

"If you really believe it's the right thing to do," Higgins said, "I'd advise you to go to Chicago without delay and see Spooner. No doubt he'll make you come down pretty hard if he gives you a lease over the heads of Barson Brothers."

"It will be a business proposition, pure and simple," I returned. "Unless I am greatly mistaken, Spooner will prefer me for a tenant. You see, my chances of expansion are greater than theirs; my business is laid on a vastly broader foundation. Barson Brothers are not likely to need more than the ground floor, while I — well, Spooner can see for himself. If he will put up a four-story building I'll take it all; and I'll not have any trouble finding tenants for the upper spaces I don't need at present."

I was aboard the Chicago night express that pulled out of the Grand Central Station about eleven o'clock. In those days we had no eighteen-hour fliers. All the following day we rumbled through a country that was new to me, for I had never been over this railroad before.

There was no dining-car on the train, but we stopped at eating-stations for meals. At one of these stops, somewhere in Canada, I was nibbling a leg of chicken when I chanced to glance out of the window upon the throng on the platform. For just a moment my eyes fell on the back of a man's head that seemed familiar. He was gone in a twinkling, but I knew I had seen him before. For the life of me I could not tell where.

I gave the matter only a passing thought at the time. When the train was under way again I forgot the incident and lost myself in Victor Hugo's "Notre Dame de Paris," which I had brought along to pass

the hours. If you have read this gloomy tale you know its sombre fascination.

And, somehow, the story seemed to awaken my conscience again. Yet I wanted the space occupied by the Barsons, and if I could rent it from Spooner, why shouldn't I? Any man had the right to outbid any other man, in buying things that were for sale. Still my mission was distasteful. Al Barson and I had been passable friends. I wondered if my present errand to Chicago could be held as a violation of personal ethics, however it might be viewed as a business proposition.

I shook off this uncomfortable feeling after a while, and resolved to forget the Barsons and Spooner during the remainder of my journey. I was in business for Addison Broadhurst, I told myself, and not for the benefit of the Barson grocery store. Business was business.

Now I leave my readers to decide this point for themselves. There are many subtle problems in business that impinge on moral philosophy and the realms of ethical reasoning.

As for me — well, I came to the conclusion long ago that where ethics and business clash unmistakably, I choose the ethics and lose the profits. I have followed this course a good many years, yet I have grown amazingly in spite of it. I sleep better nights, and when I drop a dollar bill into the plate at church I have no half-guilty sense of contributing blood money.

I had not arrived at such a plane of philosophy at the time of my trip to Chicago to see Spooner; so when my train pulled into the old Randolph Street Station, I still wanted the lease.

It was very early in the morning — before daylight. I took a cab to the Palmer House, which was then the leading hotel, and breakfasted. Then, since I had several hours at my disposal before I could hope to find Spooner in his office, I set out to see something of the city.

It was ten o'clock when I reached Spooner's place of business on Dearborn Street. As I opened the door, I beheld, sitting beside Spooner himself, the last man I wanted to see there — Hank Lemon, of New York.

Henry Lemon was a man who fitted his name as closely as anybody I ever knew. He was acid. With him, blood was never thicker than water, and for half his life he fought his own brother in business with all the savage cunning of his class. The two Lemons, Henry and William, were the most bitter competitors of their time in the piano and music line. They fell out soon after they moved their business to Junction Square, and thereafter, for ten years, they sought each other's scalps as they prowled about in the jungle of New York's music trade.

Their first venture was in their home village, where, in some devious way, they acquired possession of a lease that had belonged to Henry's employer. After a while they moved up to New York. Here they opened a very small store on Sixth Avenue, in conjunction with a florist, who occupied the other half. In a few months there was a row, the florist claiming that Henry and William were laying back, spending little money, and building up a business on his advertising and initiative. But the lease was a joint affair, and to get out of their grip the florist paid them a fat bonus and moved.

Then they sublet the vacant half of the store to a jeweler who hadn't heard of the former trouble; but it wasn't long before another rumpus ensued. The Lemons were building a card-list from the jeweler's holiday trade. I've forgotten what the next trouble was over. But the Lemons were keen enough finally to pick out Junction Square as a site, and they located there shortly after I did. Their store was around the corner from mine, on the other side of Barson Brothers' three-cornered grocery. The Lemon boys were expert merchandisers so far as getting trade was concerned. Getting trade, you know, is one proposition; keeping it is another. But New York was big, and the field was seemingly inexhaustible.

No field is big enough, however, to afford a permanent success to crooked merchants. Hank and William both discovered this truth. If I had unlimited license to extend this narrative, I should like to jump ahead of my own history and tell you of the fate that befell them both. But I must revert

to the scene in the office of Capitalist Spooner when I entered and saw Hank Lemon sitting there with him.

The moment I set eyes on this man Lemon I knew he was the fellow I had seen on the depot platform in Canada. It was plain enough that he had come on the same train with me from New York.

"Well," said I, "I see you have beaten me to it."

Of course I knew it was the lease he was after. Like myself, he was figuring two years ahead, to the time Barson Brothers' tenancy would expire. I had never thought of him in the light of a competitor for that three-cornered space, but the situation needed no elucidation now.

Hank grinned. He had a clammy sort of smile! "Yes, I got the start on you, Broadhurst," he assented. "You're not so smart as I thought you. If you had been, you'd have discovered me on the train. I was in a Pullman at first, but when I saw you I got into the second-class smoker and stayed there. Once or twice I had to get off for fodder, but I took good care to keep out of sight. I didn't need to be told what you were coming to Chicago for, Broadhurst."

Now the very sight of Lemon sitting there, with Spooner's preliminary agreement in his hands, made me hate myself. He, as well as I, was a personal acquaintance of the Barsons. He had played a sharp game on them, nevertheless, and taken the renewal of their lease out from under them. Yes, the whole aspect of the thing had been changed for me, and I was glad he had the space, not I. Business might be business, but a man's personal honor, I told myself — but I don't mean to go over this point again. I leave my readers to decide whether Hank Lemon was honorable or dishonorable in this transaction, or whether he was simply shrewd. I confess that the question is as hard to answer as Stockton's famous one: "The lady or the tiger?"

I took the first train back to New York. On the journey I had plenty of time to meditate, and when I descended from the steps of the Pullman car in the Grand Central Station my course of action was clearly mapped out.

After all, I concluded, the plan to get Barson Brothers' space had been a mere makeshift. Lemon could have it, and welcome. On entering my store I stood for a moment at the door, watching a spirited scene. The day was one on which we had advertised a special sale of household utensils, and now the store was jammed with customers. I had increased the number of clerks from three to nine, and still we needed more. My chief clerk, Tom Pennypacker, met me as I went in. He had been obliged to scare up a couple of extra clerks that morning to take care of the unprecedented crowds. We had done some special advertising work, you see. I'll take up that phase of the thing a little later.

"I tell you, Mr. Broadhurst," said Tom, "we simply must have more room. It's an awful shame we didn't get hold of that vacant plot next door. If this sort of thing keeps on, I don't see how we are going to handle the business at all."

Tom Pennypacker, I might say, was a young chap who had worked under me down at Lombard's.

"Well," I returned, "this sort of thing must keep on, and we are going to handle the crowds. We've got them coming, Tom, and we musn't sit down and do what a lot of merchants have done — let them get away with their money."

I went immediately to see Joel Langenbeck. "Well, Broadhurst," said he, as he reached up to shake hands with me, "I haven't seen you for quite a while, though I've kept an eye on your store at times, as I passed Junction Square. Confound you for quitting me as you did! I was just getting you trained so you could earn a lot of money for me."

"I appreciate the training I got in your employ," said I. "It made a business man of me. Up to that point I had been a mere clerk."

"You were an apt pupil," he returned. "All you needed was the finishing off and the broadening out. As I remarked the first time you came into my office, I want men of your calibre with me in this business, even though they insist on graduating out of it from time to time. While they stay, I make them pay me big."

"You put it in a novel way," I suggested. "Most employers talk from just the opposite angle. They talk about paying their men — not about their men paying them."

"That is why a lot of them go broke," said Langenbeck. Then he changed the subject, in a rather embarrassing way: "How's the girl? Are you engaged yet?"

"No," said I; "not quite."

He sat up suddenly in his chair. "What's the matter with you?" he asked, gruffly. "Confound you, Broadhurst, and confound that girl! If it hadn't been for her ——"

I interrupted him with a laugh. "I came here to talk about a very important proposition, Mr. Langenbeck. This is business, clear down to the bottom. I'm not after favors of any sort."

"All right," said he, "fire away. I've got twenty minutes at your disposal. I'm going to Philadelphia on the ten o'clock train."

When ten o'clock came, however, Langenbeck was still there; so was I. When noon came, we had not stirred. At two o'clock we went out to luncheon together. At three he wired to Philadelphia canceling his engagement for that day.

In the spring of the following year I moved my store to new quarters on the ground floor of an eight-story building, half a block away. I still faced Junction Square, and the magnificent new structure made my location even more favorable than the old. I occupied space about double that of my first quarters.

This building was the outcome of my visit to Joel Langenbeck. Through his influence, capitalists were interested in the opportunities presented at the Square. A corporation was organized, and the site acquired. Existing leases were bought off or exchanged for quarters in the proposed structure, and the building was rushed through to completion. It now dominated the Square.

Even before the building was completed, a large part of the floor space was taken, the upper stories being devoted to light manufacturing and the trades connected with wholesaling. And you may know that the leasing and subdividing of the first, second, and third floors had been done with a view to giving me a gradually increasing control over them. Langenbeck Brothers took two entire floors themselves for manufacturing purposes.

In the meantime I had sold my ten-year lease of the former quarters at a price which netted me several thousand dollars' profit. This, of course, was more than offset by the increased rental I had to pay for my new store; but I had the room I needed, and a grip on the future.

My growth was no boom — I'd like to emphasize this. Nor was the development of Junction Square the result of real estate schemings. The crowding of the markets did it. There is a vast difference. Before you branch out in business, be sure the people drive you to it.

But things were coming almost too swiftly. Whenever a group of merchants begins to show signs of having a cinch on the markets, a lot of other merchants proceed to put their fingers in the pie. I had been ahead of the procession up to this point, but to stay there all the time is harder than getting ahead at the start.

Diagonally opposite my store was a corner that had long been owned and occupied by a man named Dusenberry, a druggist. He belonged to the old school of business — the school that doesn't believe in cost-finding systems or modern selling ideas.

Dusenberry did not see his opportunity, even when the people began to crowd upon him. He did sell a lot of insect exterminator, true; but he made it himself, and for ten years he had been losing three cents on every box he sold. The receiver told me this, after he had investigated the causes of the failure. Yes, Dusenberry failed just at the time when he should have been getting rich. He had exterminated millions of the family *Cimicidæ*, and thus fulfilled a most worthy philanthropy to mankind. But if he had known exactly what each box of exterminator cost him to make — including the "overhead" charges that he did not think necessary to calculate — he might have charged twenty-five cents instead of fifteen, and made a good thing.

This sort of thing exhausts capital, you know, and the time finally comes for a

showdown. You might have talked costs to Dusenberry until the world stopped revolving and you never could have made him believe that his failure lay in his own mismanagement. It was competition that floored him, he declared. It was that confounded new drug store just up the Square, with its abominable ideas of selling other things besides drugs and accessories, and thus lowering the standard of the profession.

Dusenberry's antiquated building was razed to make room for a modern one. Into this latter structure, when it was finished, moved Pillsbury & Piper, dealers in general merchandise.

Pillsbury, you see, had the impression that the house of Addison Broadhurst had too much of a walkaway at Junction Square, and he set out to overtake me. He and Piper had quite a bit of capital, too, and from the outset there was a lively race.

Pillsbury, in some ways, was a splendid type of the aggressive merchant. He knew how to run a store, and how to handle the people, and I can tell you I did some hard work when I heard he was coming up to the Square. Yet I'd been expecting somebody up there after my scalp sooner or later, and I said to Tom Pennypacker:

"We've been working hard, Tom; but what we've done heretofore has been only an imitation. If Pillsbury & Piper expect to come up here and find us away down out of sight back of the ramparts, they'll have a big shock. We'll meet them on the road before they get here; we'll deploy around to their rear with part of our forces, and surround them. No, I don't expect to capture them, Tom; but we'll hold the initiative and make them fight to get out of the ring. And if they do get out, they'll find several girdles of entrenchments thrown up between them and the Broadhurst headquarters."

"I was down at Richmond once," said Tom, "and I set out one day to find the old Confederate earthworks that encircled the city during the Civil War. I finally came across a stretch of these old fortifications, but they were covered with trees, and full of gulleys where rains and floods had washed them out. They wouldn't be of any account to an army to-day. If we build any earthworks, Mr. Broadhurst, we've got to keep them constantly in condition to use."

"There'll be no trees on ours, Tom," I told him. "It has been a good many years since the War, and pretty big trees can grow in that time. But if I live fifty years longer, as I hope to, I mean to keep my earthworks clear all that time. My sentinels will guard them day and night. There'll be no chance for a sapling to get a root in."

Well, a good many years have elapsed since the morning Tom and I had this conversation — not fifty, however. I still have a long way to go before I can celebrate my golden jubilee as a merchant. But I have kept my ramparts in repair and free from obstructions, so far as I've gone, and I still hope to round out my half-century as a fighter. I'm not sure that I'll retire even then. It's more fun to fight.

Every business, I believe, is divided naturally into epochs, which tend either upward or downward. The lines that mark off these epochs from each other are the crises. To pass from a successful epoch into an unsuccessful one is an occurrence quite common, even with big concerns. When this happens it is because the fortifications have fallen into a state that gives the enemy an opening wedge.

Pillsbury & Piper gave me one of the most strenuous battles of my career, and this brings me to a point where I must give you a glimpse of my detailed selling methods.

Six blocks from my place of business stood a large apartment building, judged by the standards of that day. Of course, it was an insignificant affair beside the monster structures of the present steel era. It was only four stories high, and instead of having a single tiled entrance way, with a fountain and elevators and flunkies in buff uniforms, it followed the old-time scheme of a separate entrance for every four apartments. The fountain, elevators, and flunkies were dispensed with altogether. It was more like a row of city houses.

In one of the apartments to which I

have referred lived the family of Abraham Buskirk, comprising six persons. They were typical of my class of trade, yet, at the time of which I now speak, not one of the Buskirks had ever bought a dollar's worth of goods at my store — so far as I had discovered. If they had, my systems for detecting the names of customers had failed somehow to catch them.

I'll explain briefly that I kept two classes of lists. One class comprised the names of people who were in the habit of trading with me; the other was made up from persons who should have been customers but were not.

Abraham Buskirk, I say, had never traded with me. "We've got to get that chap," I said to Tom Pennypacker one day, as we two sat in the office going through long batches of names.

"We have tried all the usual methods," said Tom, meditatively. "We have sent him circulars A to L, and follow-up series AA. Then we sent our special form-letter Number 3, and our souvenirs 001 and 002."

"He's a tough one, to resist it all," I asserted. "That last campaign of ours has nailed a lot of the stickers. Here, for example, is the Sheed family, and the Smileys, and the Perrines — all fine material! We've got them all into the fold during the last week. But Buskirk still stays aloof. We'll put him on Dawes's list."

Bob Dawes was another of the Lombard & Hapgood boys whom I had brought up to Junction Square to work for me. I put him in the store at first, but I saw that his strongest field was outside. As a field salesman he was worth ten times as much to me as he was back of a counter. Bob's job was to go out and tackle the tough propositions like the Buskirks and fetch them over the line.

So he called one day at the Buskirk home. He introduced himself to Mrs. Buskirk and had a pleasant little chat, the burden of which was the Addison Broadhurst store.

Now there were a good many things about the Broadhurst store that were interesting — our goods, our sales force, our equipment, our prices, and so on. Bob was especially strong with the women, and if he hadn't been married already he could have picked a wife from among a thousand candidates, I reckon.

The day after Dawes called on the Buskirks, Miss Susy, the eldest daughter, came in and bought a hairclasp and some stationery. We got her name at the time of the purchase through a little premium scheme we were working.

I don't know whether Susy Buskirk hoped to find Bob Dawes there or not. That is a secret she never told. I do know that we got the Buskirk family — all of them — for steady customers. They were good traders, too.

This instance of Susy Buskirk was merely one out of many. It illustrates the way in which my business grew, despite the inroads of Pillsbury & Piper. Pillsbury, with all his aggressiveness, did not adopt my scheme. With his larger capital, bigger store, and more extensive advertising, he went after trade along somewhat different lines. He was spectacular, Pillsbury was, he made an advertising commotion and got customers by exploding dynamite under them.

My way had advantages, as events proved. Let me illustrate it with Susy Buskirk again. She married a man in moderate circumstances and lived for several years in my zone. All this time she traded with me; then her husband died, and a year later she married a rich man and moved to a distant part of New York. But for years — until her death — she remained one of my most valuable customers. She liked Bob Dawes, too, as long as she lived, and often spoke to me in a reminiscent way of the manner in which he had captured her trade. Her sons and daughters trade with me to-day, and in time I'll get her grandchildren. Probably there'll be a dozen of them.

Thus, by building up a clientele with a strong element of personality in it, I steadily laid up an asset that was destined to serve me well in times of stress.

On the other hand, Pillsbury & Piper grew very fast and made money — for a time. It is easy to make money on and off, but to keep on making it whether the sun shines or not is another matter. When business is booming and the masses have plenty of work, almost any store or factory

with reasonable management can put something into "profit and loss." But the real test of management is the slump — that terrifying time when the smoke ceases to belch from the tall chimneys, and long lines of anxious depositors line up before the paying-tellers' windows at the banks. It is then that the character of a merchant's or manufacturer's trade shows itself.

I am going to tell you just a little more about Pillsbury & Piper; but first I shall recount, in as brief space as possible, the story of a great crisis in my career.

(*To be continued.*)

A BUILDER OF AMERICAN ART

THE INSPIRING CAREER OF MR. ALEXANDER W. DRAKE WHO, AS ART EDITOR OF THE "CENTURY MAGAZINE" FOR MANY YEARS AND AS THE FRIEND OF ARTISTS HAS PROFOUNDLY INFLUENCED THE GROWTH AND CHARACTER OF ILLUSTRATIONS AND OF PRINTING

BY

HERBERT S. HOUSTON

KIPLING'S fine figure of a "man" in "If" seems to have a double in Mr. Alexander W. Drake, long the distinguished art editor of the *Century Magazine*. The illustrating and writing and printing worlds have been imputing to Mr. Drake all the virtues described in the poem, in a series of memorable dinners in which the successful men in these allied arts have told of their debt of gratitude to him. He is a man of high net value to his time. He has worked long and with rare skill and knowledge in the graphic arts — in engraving and illustrating and printing — but all with such modesty that the great world, outside his own, has known but little of the debt it owes him.

The best known illustrators and artists, more than two hundred of them, recently gave a dinner to Mr. Drake at the old Hotel Brevoort, still in the centre of much of New York's art life, and told him that his artistic judgment and friendly counsel had been a help, beyond reckoning, for more than a generation. At a later dinner, joined in by ten of the most important clubs in the arts and letters, Mr. Drake's services to every branch of publishing were celebrated. And these services have been as varied as they have been important.

In the later sixties, Mr. Drake became associated with Dr. J. G. Holland, Roswell Smith, and Richard Watson Gilder on the new *Scribner's Monthly* and when, a few years later, it became the *Century Magazine*, he continued with it as art editor and there he still continues, full of honors if not "full of years", for he belongs to the type described by Dr. Holmes as "aging toward youth". That, in brief, is his biography. But it is merely a skeleton of fact — not his life. That life has been so lit up with a radiant, strong personality that it has illuminated every field it entered.

In engraving, Mr. Drake, who was an engraver of skill himself, was the inspiriting leader of such men as Timothy Cole, Wolf, Juengling, Kingsley, French, Whitney, and King. Mr. Cole voiced the gratitude and love engravers have for him in a poem contributed to one of the dinners:

I oft compare the present days, bereft
Of youth's fine ardor and of art's first thrill,
With days now passed to dreamland, when the will
And power of Drake — like his who conquered Spain's
Armada — triumphed over lesser brains
And raised a school of far more splendid skill.
Drake's magic wand called choicest spirits forth —
New Life awoke, though critics all were wroth;
True art prevailed and made its votaries sing.
Yet value not those days as more than these:
While Co(a)le gives warmth our Drake can never freeze!

Mr. Drake, from the beginning, has made the *Century Magazine* an unquestioned arbiter and leader in the quality and range of its illustrations; and in this far-reaching work, which has had profound influence on the whole publishing world, he has had as an invaluable associate Mr. Theodore L. De Vinne, the dean and leader of American master printers.

The best estimate of Mr. Drake's work in this field has been this little appreciation from F. Hopkinson Smith:

All American illustrators, as well as all lovers of the art of reproductive printing, owe an immense debt of gratitude to Alexander W. Drake. To him, more than any one man, is due the perfection which exists to-day in the results obtained from the half-tone plate. The older men — myself among them — who saw him stand over the DeVinne presses hour after hour, teaching the printers the art of enriching the darks, without smudging or sacrificing the lights, of the artist's original drawings, need no reminder of what he has done for them and their work, but the younger and more recent additions to our ranks — those who may think the present day perfection came as a matter of course, can afford to stop and think back, lifting their hats, as we do, to one whose untiring patience, inborn love of beauty, and consummate skill made it possible.

But, high as this praise is, so distinguished an illustrator as Mr. Joseph Pennell doesn't think it adequate, for he wrote from London: "Drake has done more for the advancement of illustration than any man living, far more than Mr. Hopkinson Smith suggests or probably knows." Mr. George W. Cable wrote from Bermuda: "Never elsewhere have I seen so great a modesty and devotion of character so unfailingly combined with such masterful gifts and achievements as in Drake, in the third of a century that I have known him."

Mr. Drake's qualities — patience, love of beauty, and skill — all suffused in the joyous charm of a remarkable personality, have marked all that he has done. They have made him a discriminating collector of all sorts of unusual things: bird cages, band boxes, rings (more than a thousand gold ones showing nearly every kind and degree of craftmanship), bottles, brass (a wonderful group), Windsor chairs (every known design), pewter, ship models, and many other things. This collecting Mr. Drake has done for a generation, through sheer joy in it, and as an added means of expressing his abounding love for the beautiful and the unusual. But even this many-sided interest in collecting could not suffice to round out all his activities. The late Richard Watson Gilder discovered that Mr. Drake had a real talent for story telling, and some short stories, including "The Yellow Globe" and others, were received with much favor. But Art has been his mistress and all his gifts have been brought to her service — and he sought always to serve her by making Art lovely and true and altogether beautiful.

No wonder that such a man is most interesting to hundreds of devoted friends. Nor is it any wonder that, working chiefly through them and with them, he has been a pervading and persisting influence in maintaining the best standards of illustrating and of printing — thus serving his country and his time.

THE MARCH OF THE CITIES

A CITY THAT FINANCES ITS PROMOTION WORK BY THE BUDGET PLAN

THE Commercial Club of Aberdeen, S. D., has found a fair and effective way to raise funds for its promotion work. It has worked out the "budget system." The club decided that $25,000 was the sum needed for 1913 and appointed a "budget committee" to raise it. The committee canvassed the names of the men of Aberdeen who might support the work of the Commercial Club, and selected 574 names as those who should fairly be expected to contribute. The financial standing of

every man on this list was carefully weighed, and every one was assessed a share of the $25,000 according to the committee's judgment of his ability to pay. These assessments ranged from $30 to $600 a year apiece.

The committee then mailed a copy of a form letter to every man on the list, explaining the purpose of the plan, telling him the maximum amount of his subscription, 20 per cent. of which was to be paid immediately, and the rest not to exceed 10 per cent. a month, as the committee saw fit.

The campaign for subscriptions under this plan began on January 2d, and in less than six weeks the pledges amounted to more than $29,000 and were still coming in.

Having collected the fund, the budget committee investigates all proposals for its expenditure, whether these proposals are referred to it by the club or suggested by outside people. The committee reports its recommendations to the club, and if the club decides to spend a certain sum upon such recommendation, the disbursing of the money is done through the budget committee. The committee keeps careful records of its expenditures and accounts for them to the club. In an emergency it may spend $500 or less upon its own judgment, but plans that involve more money than this must be approved at a club meeting. At the end of the year, if any money shall remain unexpended in the treasury, it will be returned to the subscribers in shares proportioned upon their original pledges.

This method of financing city promotion work makes possible the planning of well-considered campaigns far enough ahead to give them a fair trial, substitutes certainty for uncertainty in the support of the Commercial Club, and puts its promotion work upon a much sounder foundation upon which cumulative results may be built. At the same time the business men who formerly had to take a collector's word for it that a boosting enterprise was worthy now have the sober judgment of a committee of fifteen that the scheme is good; whereas formerly they had to base their calculations of the right amount to contribute upon the solicitor's eloquence and upon their fears that they would be called stingy, they now contribute a sum which the committee has assessed them as a fair amount proportioned upon their relative ability to pay; and whereas formerly they were called upon to contribute at any time and in various sums, they now are assessed a fixed sum for a year ahead, so that they know exactly how much they can be called upon to pay and about when they will have to pay it.

The "budget plan" is easier than the old haphazard collection for the business men and fairer, for the burden does not fall so heavily upon the willing few, and much more effective for the club for it knows just what its funds will be and just what can be done with them.

FORWARD TO THE LAND

THE CREDIT BEHIND THE READY-MADE FARM

BY

GEORGE S. HODGINS

THE "ready-made farm" on the prairie is the Canadian Pacific's method of drawing men to the land. The railroad is disposing of its "land grant" acres by building houses and barns upon them, breaking the soil, and stocking the farms and then offering them, with the pioneering work all done, to settlers. The cost of the raw land is from $11 to $30 an acre for non-irrigable land, and from $35 to $70 for land that can be watered. Added to this the settler pays for the improvements that have been made.

There are several plans, or "policies," offered to intending settlers. The ready-made farms are intended for men who know something of farming. For them, the company "improves" the land so that a new arrival can take up his residence in a house already built, his barn up, his ground fenced, a well on his property, and his land plowed and seeded. They are sold at the value of the raw land, plus the cost of the improvements, the whole amount being payable in ten years at 6 per cent. interest.

Another "policy" is designed principally for men with a certain amount of capital. If they are able to bring their families and household goods and make a first payment, the company will advance up to $2,000, with which they may build a house and barn to suit themselves, drill a well, fence the property, or make such other improvements as they may desire. The rate of interest on the loan is 6 per cent. for ten years.

Any area of non-irrigable land will be sold to one person, but only 160 acres of irrigable land. Land sold on the crop-payment plan requires an initial cash payment of one tenth of the purchase price of the land. Under this arrangement one half of all the grain grown on the land is delivered to the company every year instead of cash, the company allowing the selling market price on the day of delivery. One dollar a ton is charged by the company for sugar beets, alfalfa, and timothy grown on the land, and the money so collected, plus the market value of the grain delivered to the company, is credited to the farmer against his unpaid balance.

Live stock is supplied to the farmer who may have a quantity of feed on hand, but who lacks the money for the purchase of animals. The company supplies the live stock at cost, and makes mutually satisfactory terms of payment. As an aid to this work, receiving stations have been built at points along the railroad.

The railroad has become in a sense an agricultural bank for the settlers along its lines so that these men in a new and undeveloped country have better credit facilities than thousands of good farmers in the older farming districts in Canada and in the United States.

A farm, like every other business, needs capital — not only fixed capital, such as mortgages, but working capital. Other businesses would be as handicapped as farming is handicapped if they could get working capital only upon the usual conditions under which crop mortgages furnish the farmer with money. The Canadian Pacific, being a railroad and not a bank, cannot do all for its settlers that the land banks and coöperative credit societies abroad do for their patrons, but it has given its help to the settlers along its lines where the help is most needed, for the lack of credit is perhaps the greatest obstacle that the pioneer agriculturist has to overcome.

AMERICAN FARMING CRIPPLED FOR LACK OF CREDIT

BY

EUGENE H. GRUBB

A FARMER needs ready cash on which to do business just as much as any other manufacturer needs it, and many a good farmer has been forced off the land for lack of it — just as I was when I first started. That was in 1869, when I was nineteen years old, and the farm credit situation hasn't changed enough but that I could find young men duplicating my experience now almost anywhere in this country. I leased a 100-acre farm in Blue Earth County, Minn., and went in debt $450 for a pair

of 16-year old horses that had served in the cavalry through the Civil War. I got a yoke of cattle "on time," too, and all my debt bore 12 per cent. interest besides fees and commissions, all secured by a mortgage on the coming crop.

My 13-year old brother and I worked the farm, and my younger sister cooked for us. We put in 60 acres of wheat, 20 acres of corn, and 20 acres of oats. There was no rain during the corn season and yet I got a crop, for I plowed deep and cultivated that corn once a week at night. During the winter I cut a cord of hard maple a day and hauled it four miles with the old cavalry hacks. When spring came I hauled the wheat 18 miles to a warehouse and got 60 cents a bushel for it, but this money was attached to pay my debts. When the year was over I paid the interest, gave the man back his horses and wagon, gave up the lease, and left. I was forced off the land by insufficient credit. I could farm, I made good crops, but I didn't want to belong body and soul to someone else.

For ten years I was a roustabout, fireman, and mate on the Mississippi River. I learned a mechanic's trade and did many kinds of work, but I did not get back to the land on my own account until 1885, after I had gone broke mining. In October of that year I bought out the rights of three gun men who had squatted on what is now part of my farm at Carbondale, Colo. I paid a lawyer $100 to get one of them out of jail, and I gave my note for $100 to each of the other two. I began operations with $2.85 and a mule as working capital. I borrowed the money to build an irrigating ditch, and to fence and to stock the farm; and I paid 2 per cent. a month for the money. That was the lowest rate until 1896. I have often paid 3 per cent. a month and once in a while as much as 5 per cent., or 60 per cent. a year. And I was not the exception. On the contrary, I fared better than most, for I usually could get the money, though at ruinous rates, whereas many farmers could not get it at any price. Since 1896 I have had to pay about one per cent. a month or 12 per cent. a year for working capital, and 6 per cent. a year for loans upon mortgage. There are few other businesses that would not be eaten up by interest charges like these, and rather than pay such interest most American farmers' operations are crippled by lack of capital. It is my observation all over the United States that there are but few farms that could not be much more economically run if their tillers had proper credit.

It is a happy sign for those who are beginning their farm life now that at last we are beginning to be awake to the situation, and it is the duty of every man who thinks that he is entitled to the proud title of farmer to find out about the agricultural credit societies of Europe, particularly the Raiffeissen banks of Germany, and begin to help himself. The time will come when a farmer will no more go into a farming community where there are no credit facilities than a manufacturer will now go where he can not get credit.

LAND QUESTIONS AND ANSWERS

75.—*Q.* I want an eastern country place of five or ten acres which shall be near enough a town for a woman living alone, but which might be made self-maintaining, as there is very little capital to begin with. Could you suggest locations and a system of development?

A. Assuming that one woman is not able to undertake heavy farm work, the returns must come from poultry, flowers, or vegetables. If your capital is insufficient to provide a greenhouse, you must rely on plants grown outdoors, and to get these in profitable quantity you had best look among the South Atlantic states, where the growing season is long. We suggest southern New Jersey, Delaware, the eastern part of Maryland, Virginia, or North Carolina, or southeast Pennsylvania.

Desirable land near large cities is so high-

priced that a location in or near a fair sized, thrifty town or village would seem best. A local private trade could be worked up and much of the expense of distant and commission marketing saved. The production of the highest quality goods for discerning customers will be your best course. Their exact nature will depend on local conditions.

76. — *Q.* What can you tell me about Pass Christian, Miss.? Are the climate, the social and educational advantages, the agricultural conditions, and the general location good?

A. Pass Christian, located in what is often called the "American Riviera," is a social centre and health resort noted for its genial climate and healthful conditions. The annual rainfall averages sixty inches, and the mean winter temperature is mild and delightful. The prevailing southeast winds temper both the summer and winter conditions.

The soils of the region vary somewhat but as a rule are sandy and well adapted to truck farming and the raising of small fruits, berries, pecans, sugar cane, cotton, and forage crops. Pass Christian is, however, bounded by the Gulf on the south and thickly-wooded country on the north, so that less farming is done in its immediate vicinity than near other less fashionable towns. Further inland, both the soils and the timber become heavier but the climate is warmer and less agreeable.

77. — *Q.* I have been farming under irrigation in Colorado for four years, and wish to get back into the rain belt. I have been thinking of general farming and dairying in Virginia or Arkansas. How do you compare the two states?

A. There are splendid opportunities in both states, as well as in Maryland, Missouri, Kentucky, etc., for the types of farming you mention, and of course there are also localities and conditions that should be avoided. One great difference is that much of the eastern land has been poorly farmed and robbed of its available fertility, while an equally large portion of Arkansas is as yet untouched. In the East, then, farming must be of a soil-building nature; in the West, it will be a type of pioneering. Owing to their recent development by northern farmers, their greater freedom from the hookworm, and other sanitary causes, farm communities in the Ozarks are often more progressive and prosperous than the older, more conservative sections of Virginia. If you are now in Colorado, why not try Arkansas, as the nearest place, first? If it does not suit, you can then come farther east.

78. — *Q.* I would like information about Itasca County, Minnesota, as a farming locality.

A. The soils are extremely fertile when drained and cleared, but only 6 per cent. of the land is at present in farms and only 12 per cent. of this is improved. The rest is either timbered, covered with stumps and brush, or thickly dotted with lakes and ponds.

The rainfall decreases steadily from east to west but averages about twenty-six inches. The extremes of temperature are 103 and −45 degrees; the average growing season is from May 22nd to September 24th. Hay and potatoes are the leading crops, and dairying the most developed phase of farming. The population has increased from 4,500 to more than 17,000 in ten years, but of the 830 farmers more than half are foreign-born. They are successful and by far the greater part own their farms. Logged-over land is plentiful at low prices.

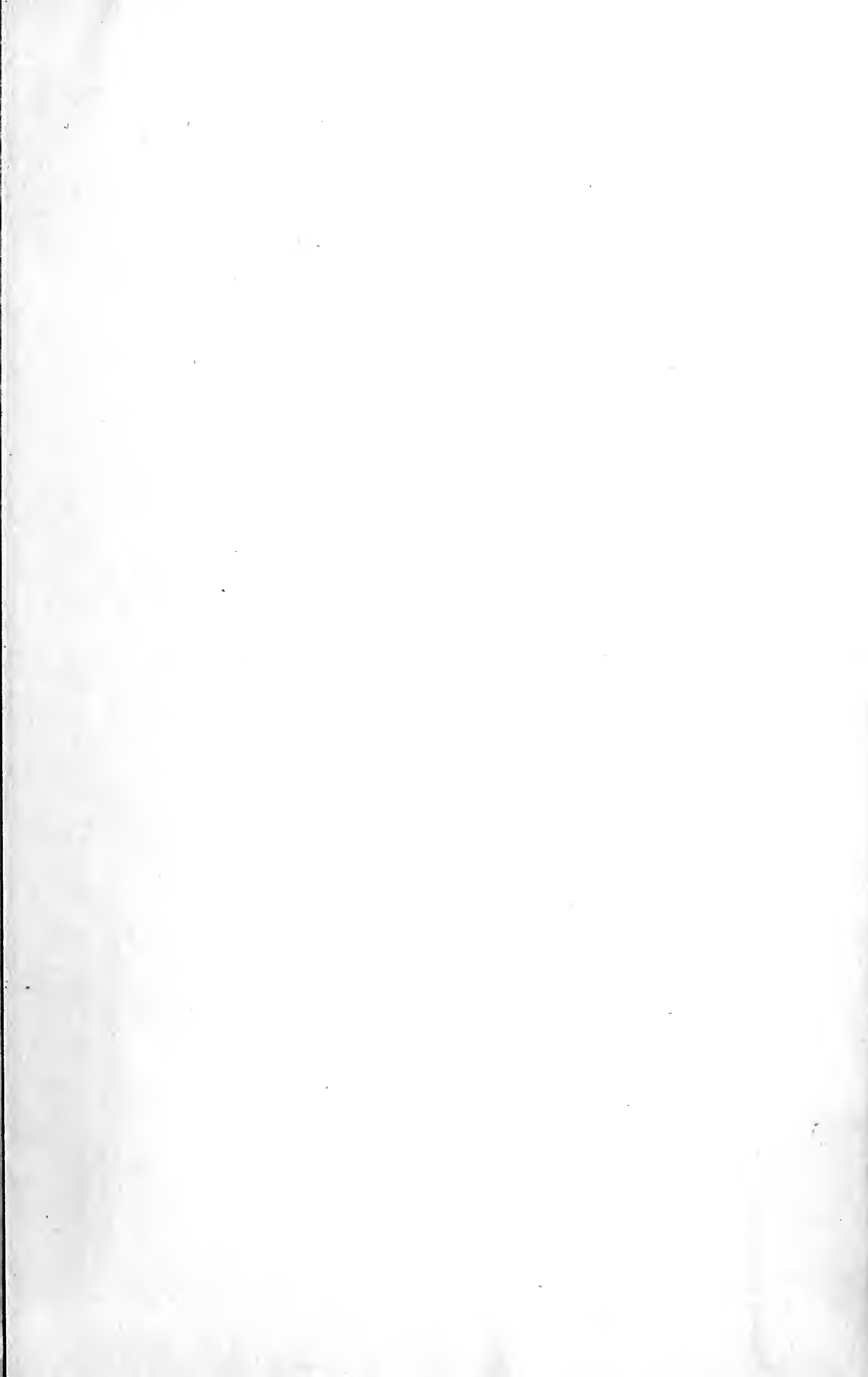
79. — *Q.* Is there Government land open to entry in Minnesota, and if so where are the local land offices? Has the state any land for sale?

A. The latest figures report 1,759,027 acres of surveyed but unappropriated public land in Minnesota. This is grouped in three sections, with land offices and acreages as follows: Cass Lake, 499,700 acres; Crookston, 999,687 acres; Duluth, 259,640 acres. The types of land include "timbered, swampy, brush land, sandy, broken, agricultural," and various combinations of these.

There is a little state land in northwestern Minnesota, and about 2,000,000 acres in the northeastern part of the state, some of which is sold every year to the highest bidder, at not less than $5 an acre. The Commissioner of Immigration at St. Paul can supply additional information.

80. — *Q.* Wishing to locate where grape fruit can successfully be grown, I have thought of Manatee County, Florida, but fail to find it among the leading counties listed in your answer to Question 70 (February, 1913). Am I wrong in thinking it a good section for my purpose?

A. No. Census figures recently available make possible a revised and amplified list of the most important Florida grape fruit raising counties, with their yields, as follows; Manatee, 173,819 boxes; Lee, 159,301; Hillsboro, 144,105; Polk, 111,426; Orange, 76,059; De Soto, 74,201; Dade, 58,487; Lake, 53,319, and Brevard, 40,196.



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